

SERVICE MANUAL

BA-5 chassis

MODEL NAME	REMOTE COMMANDER	<u>DESTINATION</u>	CHASSIS NO.
KV-27FV16	RM-Y171	US	SCC-S40K-A
KV-27FV16	RM-Y171	CND	SCC-S41J-A
KV-29FV16	RM-Y171	Е	SCC-S38Q-A
KV-29FV16C	RM-Y171	E	SCC-S38R-A
KV-32FS12	RM-Y168	US	SCC-S40F-A
KV-32FS12	RM-Y168	CND	SCC-S41F-A
KV-32FS16	RM-Y169	US	SCC-S40G-A
KV-32FS16	RM-Y169	CND	SCC-S41G-A





RM-Y171

TRINITRON® COLOR TELEVISION



SPECIFICATIONS

		KV-27FV16	KV-29FV16 KV-29FV16C	KV-32FS12	KV-32FS16	
Power requirements		120V, 60 Hz 120-220V, 50/60Hz		120V, 60 Hz	120V, 60 Hz	
Number of inputs/outputs						
	Video 1)	3	3	3	3	
	S Video 2)	2	2	1	1	
	Audio 3)	3	3	3	3	
	Audio Out 4)	1	1	1	1	
	Y,P _B , P _R ⁵⁾	1	1	1	1	
	Monitor Out	1	1			
Speaker output(W)		15Wx2	15Wx2	5Wx2	5Wx2	
Power Consumption(W)						
	In use(Max)	220W	220W	165W	170W	
	In standby	1W	1W	1W	1W	
Dimensions(W/H/D)						
	(mm)	762 x 604 x 519 mm	762 x 604 x 519 mm	800 x 704 x 582 mm	800 x 704 x 582 mm	
	(in)	30 x 23 ^{7/8} x 20 ^{1/2} in.	30 x 23 ^{7/8} x 20 ^{1/2} in.	31 ^{1/2} x 27 ^{3/4} x 23 in.	31 ^{1/2} x 27 ^{3/4} x 23 in.	
Mass						
	(kg)	49 kg.	49 kg.	74 kg.	74 kg.	
	(lbs)	107 lbs. 13 oz.	107 lbs. 13 oz.	162 lbs. 13 oz.	162 lbs. 13 oz.	

- 1) 1 Vp-p 75 ohms unbalanced, sync negative
- Y: 1 Vp-p 75 ohms unbalanced, sync negativeC: 0.286 Vp-p (Burst signal), 75 ohms
- 3) 500mVrms (100% modulation), impedance: 47kilohms
- 4) More than 408 mVrms at the maximum volume setting (variable) More than 408 mVrms (fix)
- 5) Y: 1.0 Vp-p, 75 ohms, sync negative; PB: 0.7 Vp-p, 75 ohms; PR: Vp-p, 75 ohms

Television system

American TV standard/NTSC

Channel coverage

VHF:2-13/UHF:14-69/CATV:1-125

Visible screen size

27" picture measured diagonally (KV-27FV16/29FV16/29FV16C ONLY)

32" picture measured diagonally (KV-32FS12/32FS16 ONLY)

Actual screen size

29" picture measured diagonally (KV-27FV16/29FV16/29FV16C ONLY)

34" picture measured diagonally (KV-32FS12/32FS16 ONLY)

Antenna

 $75\ ohm\ external\ antenna\ terminal\ for\ VHF/UHF$

Supplied accessories

Remote Commander RM-Y168 (KV-32FS12 ONLY) Remote Commander RM-Y169 (KV-32FS16 ONLY)

 $Remote\ Commander\ RM-Y171\ (KV-27FV16/29FV16/29FV16C\ ONLY\)$

Size AA (R6) batteries (2)

Optional accessories

Connecting cables: VMC-810S/820S, VMC-720M,

YC-15V/30V, RK74A

U/V mixer EAC-66

TV Stand: SU27FD3 (KV-27FV16/32FS12/32FS16 ONLY)

Design and specifications are subject to change without notice.

(●) SRS (SOUND RETREIVAL SYSTEM)

The (●) SRS (SOUND RETREIVAL SYSTEM) is manufactured by Sony Corporation under license from SRS Labs, Inc. It is covered by U.S. Patent No. 4,748,669. Other U.S. and foreign patents pending.

The word "SRS" and the SRS symbol (●) are registered trademarks of SRS Labs, Inc.

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WARNINGS AND CAUTIONS

CAUTION

SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVING THE ANODE.

WARNING!!

AN ISOLATION TRANSFORMER SHOULD BE USED DURING ANY SERVICE TO AVOID POSSIBLE SHOCK HAZARD, BECAUSE OF LIVE CHASSIS. THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK \triangle ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS, AND IN THE PARTS LIST ARE CRITICAL FOR SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY. CIRCUIT ADJUSTMENTS THAT ARE CRITICAL FOR SAFE OPERATION ARE IDENTIFIED IN THIS MANUAL. FOLLOW THESE PROCEDURES WHENEVER CRITICAL COMPONENTS ARE REPLACED OR IMPROPER OPERATION IS SUSPECTED.

ATTENTION!!

APRES AVOIR DECONNECTE LE CAP DE L'ANODE, COURT-CIRCUITER L'ANODE DU TUBE CATHODIQUE ET CELUI DE L'ANODE DU CAP AU CHASSIS METALLIQUE DE L'APPAREIL, OU AU COUCHE DE CARBONE PEINTE SUR LE TUBE CATHODIQUE OU AU BLINDAGE DU TUBE CATHODIQUE.

ATTENTION!!

AFIN D'EVITER TOUT RESQUE D'ELECTROCUTION PROVENANT D'UN CHÁSSIS SOUS TENSION, UN TRANSFORMATEUR D'ISOLEMENT DOIT ETRE UTILISÉ LORS DE TOUT DÉPANNAGE. LE CHÁSSIS DE CE RÉCEPTEUR EST DIRECTEMENT RACCORDÉ À L'ALIMENTATION SECTEUR.

ATTENTION AUX COMPOSANTS RELATIFS A LA SECURITE!!

LES COMPOSANTS IDENTIFIES PAR UNE TRAME ET PAR UNE MARQUE SUR LES SCHEMAS DE PRINCIPE, LES VUES EXPLOSEES ET LES LISTES DE PIECES SONT D'UNEIMPORTANCE CRITIQUE POUR LA SECURITE DU FONCTIONNEMENT. NE LES REMPLACER QUE PAR DES COMPOSANTS SONY DONT LE NUMERO DE PIECE EST INDIQUE DANS LE PRESENT MANUEL OU DANS DES SUPPLEMENTS PUBLIES PAR SONY. LES REGLAGES DE CIRCUIT DONT L'IMPORTANCE EST CRITIQUE POUR LA SECURITE DU FONCTIONNEMENT SONT IDENTIFIES DANS LE PRESENT MANUEL. SUIVRE CES PROCEDURES LORS DE CHAQUE REMPLACEMENT DE COMPOSANTS CRITIQUES, OU LORSQU'UN MAUVAIS FONTIONNEMENT SUSPECTE.

SELF-DIAGNOSTIC FUNCTION

The units in this manual contain a self-diagnostic function. If an error occurs, the STANDBY/TIMER LED will automatically begin to flash. The number of times the LED flashes translates to a probable source of the problem. A definition of the STANDBY/TIMER LED flash indicators is listed in the instruction manual for the user's knowledge and reference. If an error symptom cannot be reproduced, the Remote Commander can be used to review the failure occurrence data stored in memory to reveal past problems and how often these problems occur.

Diagnostic Test Indicators

When an error occurs, the STANDBY/TIMER LED will flash a set number of times to indicate the possible cause of the problem. If there is more than one error, the LED will identify the first of the problem areas.

Results for all of the following diagnostic items are displayed on screen. No error has occurred if the screen displays a "0".

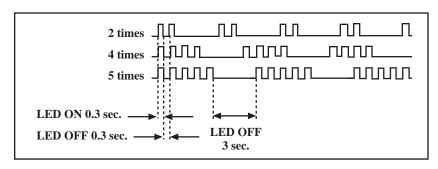
Diagnostic Item Description	No. of Times STANDBY/TIMER LED Flashes	Self-Diagnostic Display/ Diagnostic Result	Probable Cause Location	Detected Symptoms
Power does not turn on	Does not light		Power cord is not plugged in. Fuse is burned out. (F601) (A Board)	Power does not come on. No power is supplied to the TV. AC power supply is faulty.
+B overcurrent (OCP)*	2 times	2:0 or 2:1	H.OUT (Q502) is shorted. (A Board) IC702 is shorted. (CA Board)	Power does not come on. Load on power line is shorted.
I-Prot	4 times	4:0 or 4:1	+13V is not supplied. (A Board) IC502 is faulty. (A Board)	 Has entered standby state after horizontal raster. Vertical deflection pulse is stopped. Power line is shorted or power supply is stopped.
IK	5 times	5:0 or 5:1	Video OUT (IC502) is faulty. (A Board) IC301 is faulty. (MA Board) Screen (G2) is improperly adjusted.**	No raster is generated. CRT cathode current detection reference pulse output is small.

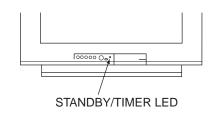
^{*} If a +B overcurrent is detected, stoppage of the vertical deflection is detected simultaneously.

The symptom that is diagnosed first by the microcontroller is displayed on the screen.

^{**} Refer to Screen (G2) Adjustments in Section 3-4 of this manual.

Display of Standby/Timer LED Flash Count





Diagnostic Item	Flash Count*
+B overcurrent	2 times
I-Prot	4 times
IK	5 times

^{*}One flash count is not used for self-diagnostic.

Stopping the Standby/Timer LED Flash

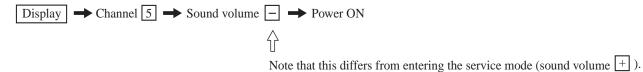
Turn off the power switch on the TV main unit or unplug the power cord from the outlet to stop the STANDBY/TIMER LAMP from flashing.

Self-Diagnostic Screen Display

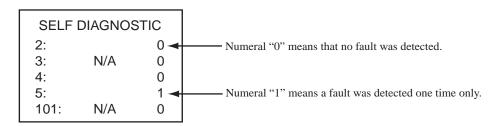
For errors with symptoms such as "power sometimes shuts off" or "screen sometimes goes out" that cannot be confirmed, it is possible to bring up past occurrences of failure on the screen for confirmation.

To Bring Up Screen Test

In standby mode, press buttons on the Remote Commander sequentially, in rapid succession, as shown below:



Self-Diagnostic Screen Display



Handling of Self-Diagnostic Screen Display

Since the diagnostic results displayed on the screen are not automatically cleared, always check the self-diagnostic screen during repairs. When you have completed the repairs, clear the result display to "0".

Unless the result display is cleared to "0", the self-diagnostic function will not be able to detect subsequent faults after completion of the repairs.

Clearing the Result Display

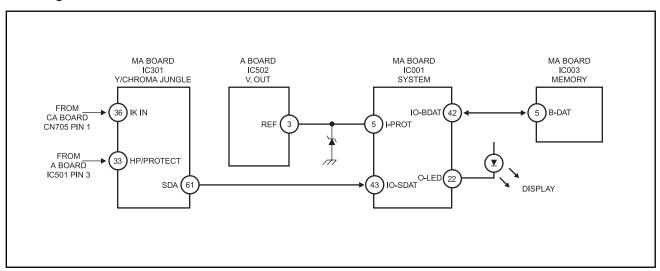
To clear the result display to "0", press buttons on the Remote Commander sequentially when the diagnostic screen is displayed, as shown below:

Channel 8 → ENTER

Quitting the Self-Diagnostic Screen

To quit the entire self-diagnostic screen, turn off the power switch on the Remote Commander or the main unit.

Self-Diagnostic Circuit



+B overcurrent (OCP)

Occurs when an overcurrent on the +B (135V) line is detected by pin 33 of IC301 (MA Board). If the voltage of pin 33 of IC301 (MA Board) is less than 1V when V.SYNC is more than seven verticals in a period, the unit will automatically turn off.

I-Prot

Occurs when an absence of the vertical deflection pulse is detected by pin 5 of IC001 (MA Board). Power supply will shut down when waveform interval exceeds 2 seconds.

IK

If the RGB levels* do not balance within 2 seconds after the power is turned on, this error will be detected by IC301 (MA Board). TV will stay on, but there will be no picture.

*(Refers to the RGB levels of the AKB detection Ref pulse that detects 1K).

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

- Check the area of your repair for unsoldered or poorly soldered connections. Check the entire board surface for solder splashes and bridges.
- 2. Check the interboard wiring to ensure that no wires are "pinched" or touching high-wattage resistors.
- Check that all control knobs, shields, covers, ground straps, and mounting hardware have been replaced.
 Be absolutely certain that you have replaced all the insulators.
- Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair.
 Point them out to the customer and recommend their replacement.
- 5. Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
- Check the line cords for cracks and abrasion.
 Recommend the replacement of any such line cord to the customer.
- Check the B+ and HV to see if they are specified values. Make sure your instruments are accurate; be suspicious of your HV meter if sets always have low HV.
- Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

Leakage Test

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes). Leakage current can be measured by any one of three methods.

- A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instructions.
- 2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
- 3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low voltage scale. The Simpson's 250 and Sanwa SH-63TRD are examples of passive VOMs that are suitable. Nearly all battery-operated digital multimeters that have a 2 VAC range are suitable (see Figure A).

How to Find a Good Earth Ground

A cold-water pipe is a guaranteed earth ground; the coverplate retaining screw on most AC outlet boxes is also at earth ground. If the retaining screw is to be used as your earth ground, verify that it is at ground by measuring the resistance between it and a cold-water pipe with an ohmmeter. The reading should be zero ohms. If a cold-water pipe is not accessible, connect a 60- to 100-watt trouble- light (not a neon lamp) between the hot side of the receptacle and the retaining screw. Try both slots, if necessary, to locate the hot side on the line; the lamp should light at normal brilliance if the screw is at ground potential (see Figure B).

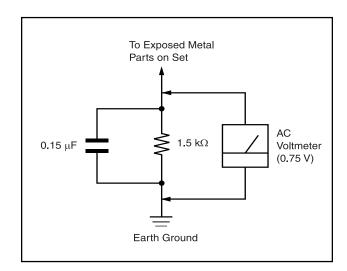


Figure A. Using an AC voltmeter to check AC leakage.

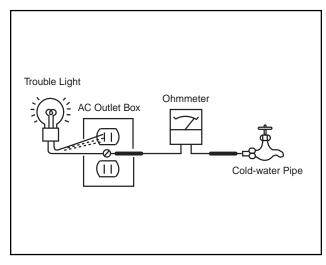


Figure B. Checking for earth ground.

SECTION 1 GENERAL

The instructions mentioned here are partial abstracts from the Operating Instruction Manual.

The page numbers shown reflect those of the Operating Instruction Manual.

Connecting Your TV

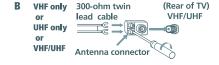
Read this chapter before setting up your TV for the first time. This section covers basic connections in addition to any optional equipment you may be connecting.

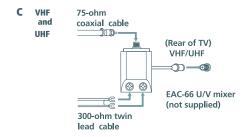
Basic Connections

TV with indoor or outdoor antenna, or CATV cable

Depending on the cable available in your home, choose one of the connections below:







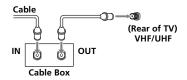
If you are connecting to an indoor or outdoor antenna, you may need to adjust the orientation of the antenna for best reception.

Operating Instructions

Cable Box Connections

Some pay cable TV systems to use scrambled or encoded signals that require a cable box to view all channels.

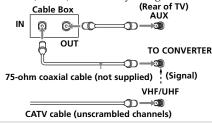
Cable Box



- 1 Connect the coaxial cable from your cable service to the IN jack on your cable box.
- **2** Connect a coaxial cable (not supplied) from the OUT jack on your cable box to the VHF/UHF jack on your TV.
- If you will be controlling all channel selection through your cable box, you should consider using the Channel Fix feature, (see page 26).

Cable Box and Cable

For this set up, you can switch between scramble channels (through your cable box), and normal (CATV) channels by using the AND button.



- If you are connecting a cable box through the AUX input and would like to switch between the AUX and normal (CATV) input, you should consider using the Channel Fix feature, (see page 26).
- Your Sony remote control can be programmed to operate your cable box, (see page 36).
- Mhen using PIP, you cannot view the AUX input in the window picture.

3

Connecting Additional EquipmentTV and VCR

Rear of TV

VIDEO IN

VIDE

1 Connect the coaxial cable from your TV antenna or cable service to the IN jack on your VCR.

3 (Optional connection)

- **2** Connect a coaxial cable (not supplied) from the OUT jack on your VCR to the VHF/UHF jack on the TV.
- To watch video programs from your VCR, tune your TV to channel 3 or 4 (as set on the rear of your VCR).

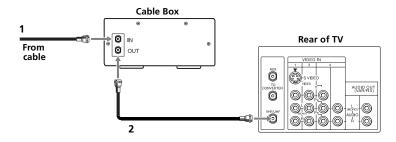
(Optional connection)

antenna

- **3** If your VCR is equipped with video outputs, you can get better picture quality by connecting A/V cables (not supplied) from AUDIO and VIDEO OUT on your VCR to AUDIO/VIDEO IN on your TV.
- For optimum picture quality, use S VIDEO instead of the yellow A/V cable. S VIDEO does not provide sound, the audio cables must still be connected.
- You can use the TVMDEO button to switch between the VHF/UHF and VIDEO inputs.

Operating Instructions

TV and Cable Box



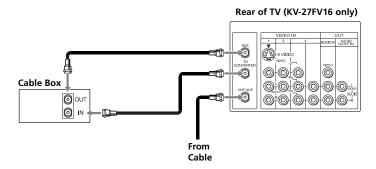
- 1 Connect the coaxial cable from your cable service to the IN jack on your cable box.
- **2** Connect a coaxial cable (not supplied) from the OUT jack on your cable box to the VHF/UHF jack on the TV.
- To view channels from your cable box, tune your TV to channel 3 or 4 (as set on the rear panel of your cable box) and use the cable box's remote control to change channels.
- If you will be controlling all channel selection through your cable box, you should consider using the Channel Fix feature, (see page 26).

Connecting Your TV

TV, Cable box, and Cable

KV-27FS16, KV-27FV16, KV-32FS16, KV-29FV16 only

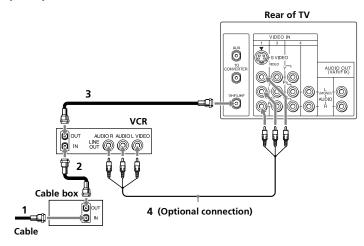
For this set up, you can switch between scrambled channels (through your cable box) and normal (CATV) channels by pressing $\stackrel{\text{ANT}}{=}$.



Mhen using PIP, the AUX input cannot be viewed in the window picture.

Operating Instructions

TV, VCR, and Cable box



- **1** Connect the coaxial cable from your cable service to the IN jack on your cable box.
- **2** Connect a coaxial cable (not supplied) from the OUT jack on your cable box to the IN jack on your VCR.
- **3** Connect a coaxial cable (not supplied) from the OUT jack on your VCR to the VHF/UHF jack on the TV.
- If you will be controlling all channel selection through your cable box, you should consider using the Channel Fix feature, (see page 26).

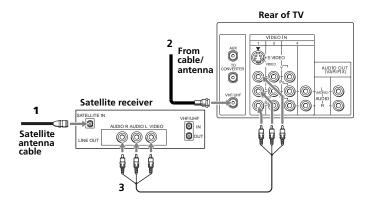
(Optional connection)

- **4** If your VCR is equipped with video outputs, you can get better picture quality by connecting A/V cables (not supplied) from AUDIO and VIDEO OUT on your VCR to AUDIO/VIDEO IN on your TV.
 - For optimum picture quality, use S VIDEO instead of the yellow A/V cable. S VIDEO does not provide sound, the audio cables must still be connected.
- You can use the TVMDEO button to switch between the VHF/UHF and VIDEO inputs.

7

Connecting Your TV

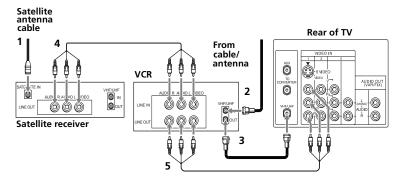
TV and Satellite Receiver



- **1** Connect the cable from your satellite antenna to SATELLITE IN on your satellite receiver.
- **2** Connect the coaxial cable from your cable or antenna to the VHF/UHF jack on your TV.
- **3** Using A/V cables, connect AUDIO and VIDEO OUT on your satellite receiver to AUDIO and VIDEO IN on your TV.
- For optimum picture quality, use S VIDEO instead of the yellow A/V cable. S VIDEO does not provide sound, the audio cables must still be connected.
- You can use the TVVIDEO button to switch between the VHF/UHF and satellite receiver inputs.

Operating Instructions

TV, Satellite Receiver, and VCR

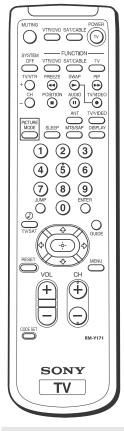


- 1 Connect the cable from your satellite antenna to SATELLITE IN on your satellite receiver.
- **2** Connect the coaxial cable from your cable or antenna to the IN jack on your VCR.
- **3** Using a coaxial cable, connect the OUT jack on your VCR to the VHF/UHF jack on your TV.
- **4** Using A/V cables, connect AUDIO and VIDEO OUT on your satellite receiver to AUDIO and VIDEO IN on your VCR.
- **5** Using A/V cables, connect AUDIO and VIDEO OUT on your VCR to AUDIO and VIDEO IN on your TV.
- To view from the satellite receiver or VCR, select the video input to which your satellite receiver or VCR is connected by pressing TVVIDEO on the remote control.

Using the Remote Control and Basic Functions

This section shows you how to use the more advanced buttons on the remote control and how to use the on-screen menus.

Using the Remote Control



Button	Description
POWER	Press when you want to turn connected equipment on and off.
FUNCTION	Press when you want to control connected equipment with your remote control.
MUTING	Instantly turns off the sound.
	Press again or press $\stackrel{\text{VOL}}{+}$ to restore sound.
SYSTEM OFF	Powers off all Sony equipment at once, (may not work with older equipment).
TV/VIDEO	Cycles through available video inputs.
ANT	Press to change the VHF/UHF input to the AUX input (KV-27FS16, KV-27FV16, KV-32FS16 only).
TV/VTR	Press when you are finished using a VCR and you want to switch to the TV input. Your VCR power will remain on.
ф. ф. ф.	Moves the cursor in the on- screen menus. Press the arrow buttons to move the cursor. Press the center button to select or access an option.
PICTURE MODE	Cycles through the available Video Mode settings.

The remote control shown (RM-Y171) is for KV-27FV16. Your remote control may not look like the one illustrated.

Using the Remote Control and Basic Functions

SLEEP	Turns the TV off automatically in approximately 15, 30, 45, 60, 90, or 120 minutes. Cancel by pressing until SLEEP OFF appears.
MTS/SAP	Cycles through the Multi-channel TV Sound (MTS) options: Stereo, Mono, and Auto-SAP (Second Audio Programming).
DISPLAY	Press once to show current time, (if set) and channel number.
TV/SAT	Cycles through available Steady Sound settings, (see page 23).
JUMP	Alternates between the last two channels selected with the ①-③ buttons.
GUIDE	Brings up the custom guide of your satellite receiver.
MENU	Displays the on-screen menu. Press again to exit the menu at any time.
RESET	Press to return to factory settings while in an on-screen menu.
CODE SET	Use to program your remote control to operate connected video equipment, (see page 36).

For information on Picture in Picture (PIP) operation buttons, see page 17.

If you lost your remote control, see page 40.

14

Troubleshooting

If you are having a problem with your TV, try the suggestions below. If the problem persists, contact your nearest Sony dealer.

No picture, no	Make sure the power cord is plugged in.				
sound	If red light is flashing on the front of your TV for more than a few minutes, disconnect and reconnect the power cord to restore the TV. If the problem continues, call your local service center.				
	Check the TV/VIDEO settings: when watching TV, set to TV; when watching video equipment, set to VIDEO (page 14).				
	Make sure the batteries have been inserted correctly into the remote control (page 2).				
	Try another channel, it could be station trouble.				
Poor or no	Adjust Picture in the Video menu (page 22).				
picture, good	Adjust Brightness in the Video menu (page 22).				
sound	Check the antenna and/or cable connections (page 3).				
Good picture, no sound	Press on that MUTING disappears from the screen (page 14).				
	Check your Audio settings. Your TV may be set to Auto-SAP (page 24).				
No color	Adjust Color in the Video menu (page 22).				
No signal	Check the Cable setting in the Channel Setup menu (page 25).				
	Check the antenna and/or cable connections (page 3).				
	Make sure the channel selected is currently broadcasting.				
Dotted lines or	Adjust the antenna.				
stripes	Move the TV away from other electronic equipment.				
	Some electronic equipment can create electrical noise, which can interfere with TV reception.				
Double images or ghosts	Check your outdoor antenna or call your cable service.				

Operating Instructions

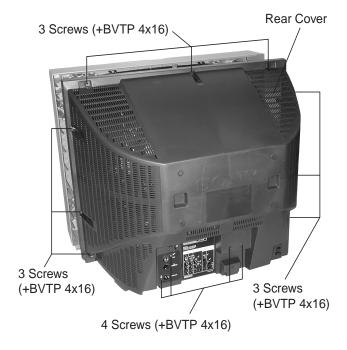
Cannot receive	_	Males arms Cable is not to OEE in the Channel Catron
higher number		Make sure Cable is set to OFF in the Channel Setup menu (page 25).
channels (UHF) when using an antenna		Perform Auto Program to add channels that are not presently in the memory (page 16).
Cable stations don't seem to		Make sure Cable is set to ON in the Channel Setup menu (page 25).
work		Perform Auto Program to add channels that are not presently in the memory (page 16).
Remote control		Batteries could be weak. Replace them (page 2).
does not operate		Move the TV 3-4 feet away from fluorescent lights.
The TV needs to be cleaned		Clean the TV with a soft dry cloth. Never use strong solvents such as thinner or benzine, which might damage the finish of the cabinet.
Lost password for Parental Control		In the password screen, enter the following master password: 4357. After using the master password, you must create a new password, it cannot be used to unlock currently blocked channels.
You lost your remote control		You can use the front A/V panel controls to access the menu. Press ⊕ to open the menu. Use the ♠ or ♥ buttons on the front A/V panel instead of the ❖ or ❖ buttons on the remote control. Use the ⊕ button on the front A/V panel instead of the ❖, ❖, and ⊕ buttons on the remote control. Press ⊕ again when the setting or adjustment is complete. Contact your nearest Sony dealer to order a replacement.
Cannot access other menus	٥	If you use the button to close the Basic menu, only the Basic menu appears when you press again. To
when using the Basic Menu		have access to the other menus, use the ♂ button to select Advance Menu (page 35).

If, after reading these Operating Instructions, you have additional questions related to the use of your Sony television, please call our Direct Response Center at 1-800-222-SONY (7669) (U.S. residents only) or (416) 499-SONY (7669) (Canadian residents only).

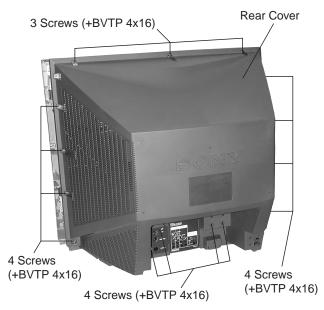
SECTION 2 DISASSEMBLY

2-1. REAR COVER REMOVAL

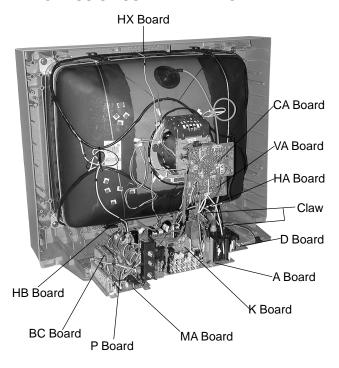
KV-27FV16/29FV16/29FV16C ONLY



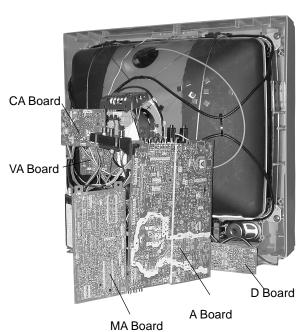
KV-32FS12/32FS16 ONLY



2-2. CHASSIS ASSEMBLY REMOVAL



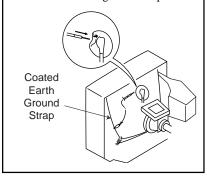
2-3. SERVICE POSITION

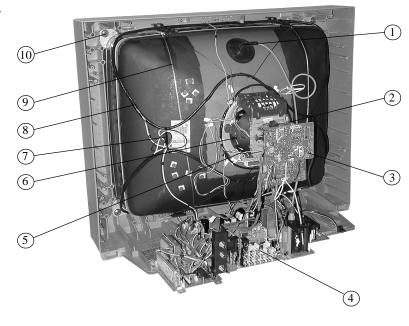


2-4. PICTURE TUBE REMOVAL

WARNING: BEFORE REMOVING THE ANODE CAP

High voltage remains in the CRT even after the power is disconnected. To avoid electric shock, discharge CRT *before* attempting to remove the anode cap. Short between anode and CRT coated earth ground strap.





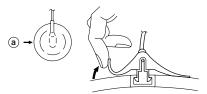
- 1. Discharge the anode of the CRT and remove the anode cap.
- 2. Unplug all interconnecting leads from the deflection yoke, neck assembly, degaussing coils and CRT grounding strap.
- 3. Remove the CA Board from the CRT.
- Remove the chassis assembly.
- 5. Loosen the neck assembly fixing screw and remove.
- 6. Loosen the deflection yoke fixing screw and remove.
- Place the set with the CRT face down on a cushion and remove the degaussing coil holders.
- 8. Remove the degaussing coils.
- 9. Remove the CRT grounding strap and spring tension devices.
- 10. Unscrew the four CRT fixing screws [located on each CRT corner] and remove the CRT [Take care not to handle the CRT by the neck].

ANODE CAP REMOVAL

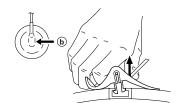
WARNING: High voltage remains in the CRT even after the power is disconnected. To avoid electrical shock, discharge the CRT **before** attempting to remove the anode cap. Short between anode and coated earth ground strap of CRT.

NOTE: After removing the anode, short circuit the anode of the picture tube and the anode cap to either the metal chassis, CRT shield, or carbon painted on the CRT.

REMOVAL PROCEDURES



1) Turn up one side of the rubber cap in the direction indicated by arrow (a).



② Use your thumb to pull the rubber cap firmly in the direction indicated by arrow ⓑ.



When one side of the rubber cap separates from the anode button, the anode cap can be removed by turning the rubber cap and pulling it in the direction of arrow (c).

HOW TO HANDLE AN ANODE CAP

- ① Do not use sharp objects which may cause damage to the surface of the anode cap.
- ② To avoid damaging the anode cap, do not squeeze the rubber covering too hard. A material fitting called a shatter-hook terminal is built into the rubber.
- ③ Do not force turn the foot of the rubber cover. This may cause the shatter-hook terminal to protrude and damage the rubber.





SECTION 3 SET-UP ADJUSTMENTS

The following adjustments should be made when a complete realignment is required or when a new picture tube is installed.

These adjustments should be performed with rated power supply voltage unless otherwise noted.

Set the controls as follows unless otherwise noted:

VIDEO MODE: STANDARD

PICTURE control: Normal BRIGHTNESS control: Normal

Perform the adjustments in order as follows:

- 1. Beam Landing
- 2. Convergence
- 3. Focus
- 4. Screen (G2)
- 5. White Balance

Note: Test equipment required:

- Color Bar Pattern Generator
- Degausser
- DC Power Supply
- · Digital Multimeter

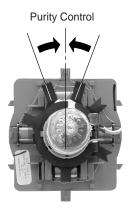
3-1. BEAM LANDING

Before beginning adjustment procedure:

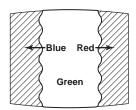
- 1. Degauss the entire screen.
- 2. Feed in the white pattern signal.

Adjustment Procedure

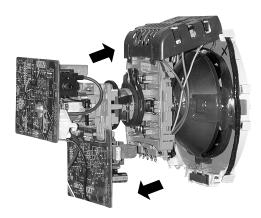
- 1. Input a raster signal with the pattern generator.
- Loosen the deflection yoke mounting screw and set the purity control to the center as shown below.



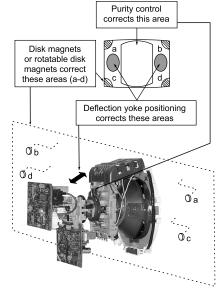
- 3. Turn the raster signal of the pattern generator to green.
- 4. Move the deflection yoke backward and adjust the purity control so that green is in the center and red and blue are at the sides evenly.



5. Move the deflection yoke forward and adjust so that the entire screen becomes green.



- Switch over the raster signal to red and blue and confirm the condition.
- 7. When the position of the deflection yoke is determined, tighten it with the deflection yoke mounting screw.
- 8. If landing at the corner is not right, adjust by using the disk magnets.



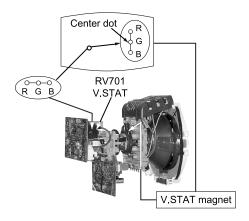
3-2. CONVERGENCE

Before starting convergence adjustments:

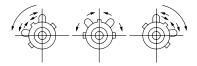
- 1. Perform FOCUS, V.LIN AND V.SIZE adjustments.
- 2. Set BRIGHTNESS control to minimum.
- 3. Feed in dot pattern.

Vertical Static Convergence

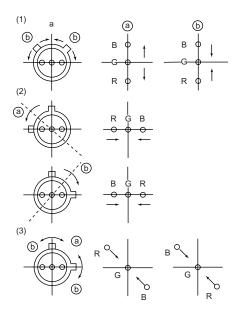
 Adjust V.STAT magnet to converge red, green and blue dots in the center of the screen (Vertical movement adjust V.STAT RV 701 to converge).



2. Tilt the V.STAT magnet and adjust static convergence to open or close the V.STAT magnet.



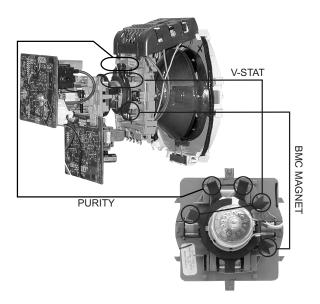
When the V.STAT magnet is moved in the direction of arrows a and b, red, green, and blue dots move as shown below:

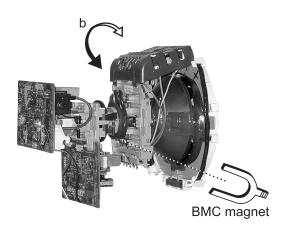


Horizontal Static Convergence

If the blue dot does not converge with the red and green dots, perform the following:

- 1. Move BMC magnet (a) to correct insufficient H. Static convergence.
- 2. Rotate BMC magnet (b) to correct insufficient V. Static convergence.
- 3. After adjusting the BMC magnet, repeat Beam Landing Adjustment.

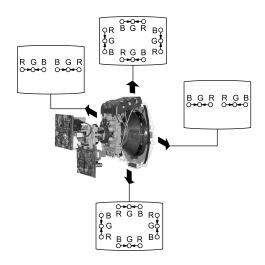




Dynamic Convergence Adjustment

Before performing this adjustment, perform Horizontal and Vertical Static Convergence Adjustment.

- 1. Slightly loosen deflection yoke screw.
- 2. Remove deflection yoke spacers.
- 3. Move the deflection yoke for best convergence as shown on the following page.



- 4. Tighten the deflection yoke screw.
- 5. Install the deflection yoke spacers.

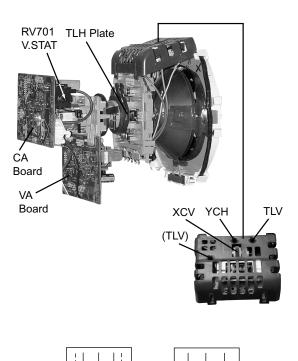
TLH Plate Adjustment

B R (R)(B)

(B)(R)

TLH-

- 1. Input crosshatch pattern.
- 2. Adjust PICTURE QUALITY to standard, PICTURE and BRIGHTNESS to 50%, and OTHER to standard.
- 3. Adjust the Horizontal Convergence of red and blue dots by tilting the TLH plate on the deflection yoke.

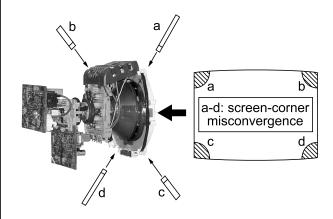


- 4. Adjust XCV core to balance X axis.
- 5. Adjust YCH VR to balance Y axis.
- 6. Adjust vertical red and blue convergence with V.TILT (TLV VR).

Perform adjustments while tracking items 1 and 2.

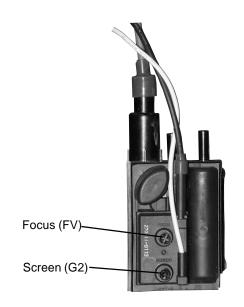
Screen-Corner Convergence

1. Affix a permalloy assembly corresponding to the misconverged areas.



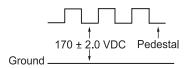
3-3. FOCUS

1. Adjust FOCUS control for best picture.



3-4. SCREEN (G2)

- 1. Input a dots pattern.
- Set the PICTURE and BRIGHTNESS controls at minimum and COLOR control at normal.
- 3. Adjust SBRT, GCUT, BCUT in service mode with an oscilloscope as shown below so that voltages on the red, green, and blue cathodes are 170 ± 2.0 VDC.



4. Observe the screen and adjust SCREEN (G2) VR in FBT to obtain the faintly visible background of dot signal.

3-5. METHOD OF SETTING THE SERVICE ADJUSTMENT MODE

Service Mode Procedure

- 1. Standby mode (power off).
- Display → Channel 5 → Sound volume + → Power on the Remote Commander (press each button within a second).

Service Adjustment Mode In

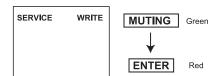
1. The CRT displays the item being adjusted.



- 2. Press 1 or 4 on the Remote Commander to select the item.
- 3. Press 3 or 6 on the Remote Commander to change the data.
- 4. Press MUTING then ENTER to save into the memory.

Service Adjustment Mode Memory

Turn set off then on to exit service adjustment mode.



3-6. WHITE BALANCE ADJUSTMENTS

- 1. Input an entire white signal with burst.
- 2. Set to Service Adjustment Mode.
- 3. Set the PICTURE and BRIGHTNESS to minimum.
- 4. Adjust with SBRT if necessary.
- 5. Select GCUT and BCUT with 1 and 4.
- 6. Adjust with 3 and 6 for the best white balance.
- 7. Set PICTURE and BRIGHTNESS to maximum.
- 8. Select GDRV and BDRV with 1 and 4.
- 9. Adjust with 3 and 6 for the best white balance.
- 10. To write into memory, press MUTING then ENTER.

SECTION 4 SAFETY RELATED ADJUSTMENTS

4-1. ► R564 CONFIRMATION METHOD (HV HOLD-DOWN CONFIRMATION) AND READJUSTMENTS

The following adjustments should always be performed when replacing the following components which are marked with \square on the schematic diagram:

Part Replaced (∠)	Adjustment (►)
DY, T505, CRT, IC501, C507, C520, C505, C509, C515, T504, T503, C551, L510, C546, C537, C547, D517, D518, D519, R560, R561, R562, R563, R565, R566, R567, R525	HV HOLD-DOWN R564

Preparation Before Confirmation

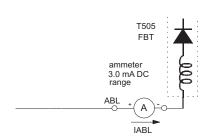
- 1. Using a Variac, apply AC input voltage: 120 ± 2 VAC.
- 2. Turn the POWER switch ON.
- Input a white signal and set the PICTURE and BRIGHTNESS controls to maximum.
- Confirm that the voltage between C546 (+) or TP503 and ground is more than 21.0 VDC (KV-27FV16/29FV16/ 29FV16C ONLY), 23.0 VDC (KV-32FS12/32FS16 ONLY).

Hold-Down Operation Confirmation

- 1. Connect the current meter between Pin 11 of the FBT (T505) and the PWB land where Pin 11 would normally attach. (See Figure 1 on the next page.)
- 2. Input a dot signal and set PICTURE and BRIGHTNESS to minimum: IABL = $1730 \pm 100 \,\mu\text{A}$ (KV-27FV16/29FV16/29FV16C ONLY), IABL = 2175 + 100/- 325 μA (KV-32FS12/32FS16 ONLY).
- 3. Confirm the voltage of A Board TP-600 is 135 ± 1.5 VDC.
- 4. Connect the digital voltmeter and the DC power supply via diode 1SS119 to C546 (+) and ground. (See Figure 1 on the next page.)
- 5. Increase the DC power voltage gradually until the picture blanks out.
- 6. Turn DC power source off immediately.
- 7. Read the digital voltmeter indication $(standard < 24.78 + 0.0/-0.1\ VDC KV-27FV16/29FV16/\\ 29FV16C\ ONLY)\ (standard < 27.24 + 0.0/-0.1\ VDC KV-32FS12/32FS16\ ONLY)\ .$
- 8. Input a white signal and set PICTURE and BRIGHTNESS to maximum: IABL = $1730 \pm 100 \,\mu\text{A}$ (KV-27FV16/29FV16/29FV16/29FV16C ONLY), IABL = 2175 + 100/- $325 \,\mu\text{A}$ (KV-32FS12/32FS16 ONLY).
- 9. Repeat steps 4 to 7.

Hold-Down Readjustment

If the setting indicated in step 2 of Hold-Down Operation Confirmation cannot be met, readjustment should be performed by altering the resistance value of R564 component marked with \blacksquare .



4-2. B+ VOLTAGE CONFIRMATION AND ADJUSTMENT

Note: The following adjustments should always be performed when replacing the following components, which are marked with \square on the schematic diagram on the A Board.

A BOARD: IC601, PH601

- 1. Using a Variac, apply AC input voltage: 130 + 2.0/-0.0 VAC.
- 2. Input a monoscope pattern.
- $3. \ \ Set the PICTURE and BRIGHTNESS controls to minimum.$
- 4. Confirm that the voltage of A Board TP-600 is <136.5 VDC.
- 5. If step 3 is not satisfied, replace the components listed above, then repeat steps 1–3.

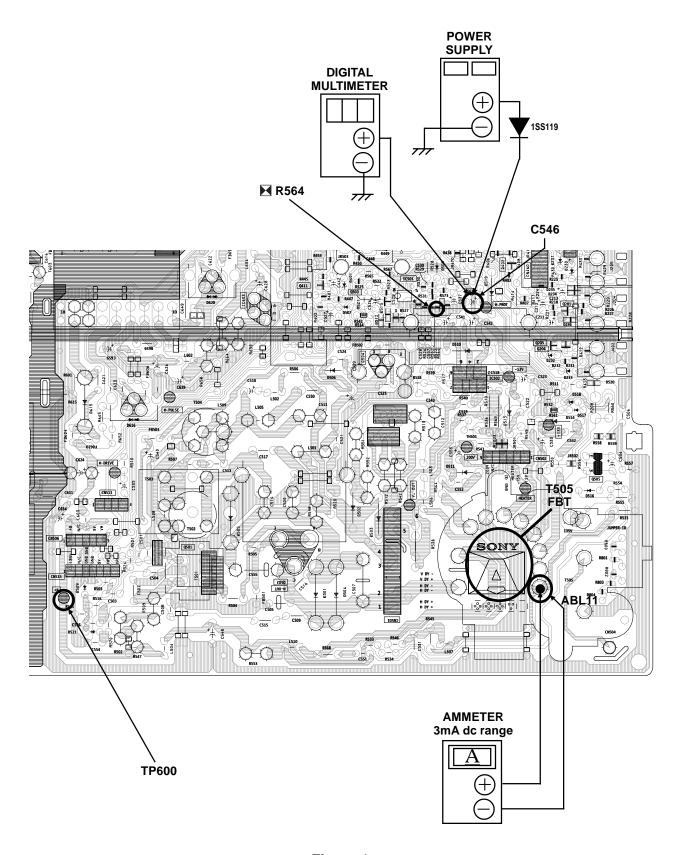


Figure 1

SECTION 5 CIRCUIT ADJUSTMENTS

ELECTRICAL ADJUSTMENTS BY REMOTE COMMANDER

Use the Remote Commander (RM-Y168, RM-Y169 or RM-Y171) to perform the circuit adjustments in this section.

NOTE: Test Equipment Required:

- · Pattern generator
- · Frequency counter
- · Digital multimeter
- · Audio oscillator

5-1. SETTING THE SERVICE ADJUSTMENT MODE

- 1. Standby mode (power off).
- Display → Channel 5 → Sound volume + → Power on the Remote Commander (press each button within a second).

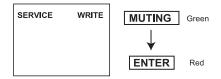
Service Adjustment Mode On

1. The CRT displays the item being adjusted.

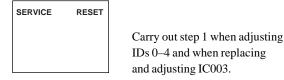


- 2. Press 1 or 4 on the Remote Commander to select an item.
- 3. Press 3 or 6 on the Remote Commander to change the data.
- 4. Press MUTING then ENTER to save into the memory.

Service Adjustment Mode Memory



1. Press 8 then ENTER on the Remote Commander to initialize.

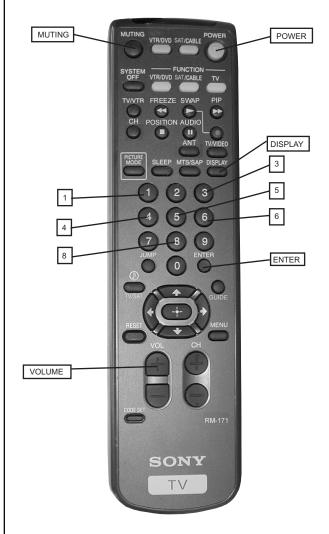


2. Turn set off then on to exit service adjustment mode.

5-2. MEMORY WRITE CONFIRMATION METHOD

- 1. After adjustment, remove the power plug from the AC outlet, then plug it in again.
- 2. Turn the power switch ON and set to service mode.
- 3. Call the adjusted items again to confirm they were adjusted.

5-3. ADJUSTMENT BUTTONS AND INDICATORS



RM-Y171

Adjustment Items

Reg#	ITEM	FUNCTION	RANGE	FIX DATA	NTSC 27	PAL M	PAL N	VIDEO	NTSC 32	RF	AVERAGE DATA 27FV	AVERAGE DATA 32FS
1	HSIZ	Horizontal Size Adjustment	0-63		15	12	7		18		11	22
2	HPOS VBOW	Horizontal Position Adjustment Vertical Line Bowing Adj.	0-63 0-15		13	8 10	9		13		20 7	22 9
3 4	VANG	Vertical Line Bowing Adj. Vertical Line Bowing Slant Adj.	0-15		9	10	9		9		9	7
5	VTRP	TRAPEZIUM	0-31		19	14	14		18		21	17
6	HTRP	Horiz. Trapezoid	0-15		6	7	5		6		0	2
7	TROT	Tilt Correction	0-63		31	31	31		31		31	31
8	PAMP UPIN	Horizontal PIN distortion Adj. Upper PIN Distortion Adj.	0-63 0-63		19 34	19 33	21 36		27 41		20 37	27 38
10	LPIN	Lower PIN Distortion Adj.	0-63		32	34	40		39		33	35
11	VSIZ	Vertical Size Adjustment	0-63		32	43	29		51		33	51
12	VPOS	Vertical Position Adj.	0-63		30	30	32		42		36	39
13	VLIN	Vertical lineality Adj.	0-15		3 6	6	10		5		3 8	4
14 15	SCOR VZOM	Vertical "S" Correction Adjustment 16:9 CRT Z Mode on/off	0-15 0-1	0	0	8	10		8		0	8
16	EHT	Vertical High-Voltage Compensation	0-15	5							5	5
17	ASP	Aspect Ratio control	0-63	47							47	47
18	SCRL	16:9 CRT Z Mode Trans. Scroll	0-63	31							31	31
19	HBLK	Horizontal Blanking on/off Left Blanking Adjustment	0-1	1							1	1
20 21	LBLK RBLK	Rigth Blanking Adjustment	0-15 0-15	13 8							13 7	13 8
22	HDW	Horizontal Drive Pulse Width	0.10	1							1	1
23	EWDC	"Parabola" EW, D.C. Adjustment	0-1	0							0	0
24	LVLN	Lower Screen BTM Vertical Line Adj.	0-15	0							0	0
25	UVLN	Uppe Screen BTM Vertical Line Adj.	0-15	0							0	0
26 27	INTL G2SW	INTERLACE	0-3 0-1	0							0	0
28	G2LV		0-7	0							0	0
29	HOSC	Horizontal VCO Oscillation Freq.	0-15	7							7	7
30	VSS	Vertical Sync Slice Level	0-3	0							0	0
31	HSS	Horizontal Sync Slice Level	0-1	0							0	0
32 33	HMSK VTMS	For Macro Vision Select Signal VTIM Pin	0-1 0-3	0							0	0
34	CDMD	Vertical Count Down Mode Switching	0-3	0	*	*	*	3			3	3
35	AFC	AFC Loop Gain Switching	0-3	0							0	0
36	FIFR	Field Frequency	0-3	**							3	3
37	VBLK	VBLKW	0-3	0							0	0
38 39	REFP JPSW	REFP JUMPSW	0-1 0-1	0 MENU							0	0
40	RDRV	R Output Drive control	0-63	***							31	40
41	GDRV	G Output Drive control	0-63	25							22	42
42	BDRV	B Output Drive control	0-63	25							21	31
43	RCUT	R Output Cutoff control	0-63	31							31	31
44 45	GCUT BCUT	G Output Cutoff control B Output Cutoff control	0-63 0-63	15 12							13 14	12 15
46		SUB CONT	0-05	8							11	11
47	SHUE	Sub HUE adjustment	0-15	16							17	16
48	SCOL	Sub COLOR adjustment	0-15		16	16	16				17	18
49	SBRT	Sub BRIGHTNESS adjustment	0-31	16 7							15	16
50 51	CCOL	SUB COLOR (RF) SUB COLOR (RF)	0-31 0-31	,	7	7	7				6 7	6 4
52		YUV U OFFSET	0-15	7			-				7	7
53	VOFS	YUV V OFFSET	0-15	7							7	7
54	RON	R Output on/off	0-1	1							1	1
55 56	GON BON	G Output on/off B Output on/off	0-1 0-1	1							1	1
57	AXPL	Axis PAL	0-1	0							0	0
58	AXNT	Axis NTSC	0-1	1							1	1
59	CBPF	Chroma BPF on/off	0-1	1							1	1
60	CTRP	Y TRAP FILTER on/off	0-1	1							1	1
61 62	COFF KOFF	Color On/off Set Color Killer	0-1 0-1	0							0	0
63	SSHP	Sub SHARPNESS	0-15	5							5	5
64	SHPF	SHARPNESS Circuit Fo	0-3	Palette							2	2
65	PREL	Pre-Shoot/ Over-Shoot	0-1	1							0	0
66 67	Y-DC GAMM	DC transmition Ratio Switching Gamma Correction	0-3	Palette	1						2	2
68	ABLM	ABL Mode Switch	0-3 0-1	Palette 1							1	1
69	VTH	ABL CD VHT Switching	0-1	1							1	1
70	YDEL	Y Delay Time Control	0-15	7							7	7
71	NCOL	No Color ID	0-1	1							1	1
72	FSC	FSC Out on/off	0-1	1							1	1
73 74	K-ID GDOF	Killer ID Control on/off	0-1 0-31	3	 		1			1	3	3
75	BDOF		0-31	16							16	16
76	GCOF		0-31	16							16	16
77	BCOF		0-31	7							7	7
78 79	SYSC VENH	Color System Vertical Enhancement	0-7 0-7	4 Palette	 						4 5	3
18	V ĽIN∏	vortical Ethiancement	U-1	raielle	1		l	l	1	l	L S	ا ع

Reg#	ITEM	FUNCTION	RANGE	FIX DATA	NTSC 27	PAL M	PAL N	VIDEO	NTSC 32	RF	AVERAGE DATA 27FV	AVERAGE DATA 32FS
		PDS OFF	0-1	0	14130 27	IALW	TALN	VIDEO	14130 32	IXI	0	0
81	CK	CK	0-1	0							0	0
82	VNL	VNL	0-15	3							3	3
	HPK	HPK	0-1	0							0	0
	HPKO	HPK OFF	0-1	Palette							0	0
	CORE TRAP	CORE TRAP	0-3 0-1	1							1	1
	CHTR	CH TRAP	0-1	0							0	0
	CBPF	CBPF	0-1	1							1	1
89	ENHO	ENHOFF	0-1	0							0	0
	NMRD	NMRD	0-3	0							0	0
	YAPS	YAPS	0-3	3							3	3
	CLKS NSTD	CLKS NSTDS	0-3 0-3	0							0	0
	MSS	MSS	0-3	0							0	0
	KILS	KILS	0-3	1							1	1
96	ADIN	ADIN	0-1	0							0	0
	EXCS	EXCSS	0-3	1							1	1
	CPP	CPP	0-3	2							2	2
	HDP	HDP	0-7	4							4	4
	CDL DYCR	DYCOR	0-7 0-15	2	 				 		4 2	2
	DYGN	DYGAIN	0-15	10	 				 		10	10
	DCCR	DCCOR	0-15	3	1						3	3
	DCGN	DCGAIN	0-15	6							6	6
	YNRL	YNRLIM	0-3	1							1	1
	CNRL	CNRLIM	0-3	1							1	1
	WSC	WSC	0-3	1							1	1
	VTRH VTRR	VTRH VTRR	0-3 0-3	1							1	1
	LDSR	LDSR	0-3	2							2	2
	VAPG	VAPGAIN	0-7	3							3	3
	VAPI	VAPINV	0-31	6							6	6
	TEST	TEST	0-1	0							0	0
	YPFT	YPFT	0-3	3							3	3
	YPFG	YPFG	0-15	7							7	7
	CC3N SELD	CC3N	0-1 0-1	1							0	0
	D2GN	D2GAIN	0-7	4							5	5
	YHCR	YHCOR	0-3	0							0	0
120	YPFC	YPFCOR	0-1	0							0	0
	SHT	SHT	0-3	0							0	0
	MVT	MVT	0-1	0							0	0
	OTT CL2D	OTT CL2D	0-1 0-1	0 1							0	0
	CLZD	CLKGGT	0-1	0							0	0
	HPLL	HPLLFS	0-1	1							1	1
		BPLLFS	0-1	0							0	0
	FSCF	FSCFG	0-1	0							0	0
	PLLS	PLLS	0-1	1							1	1
	KILR	KILR	0-15	3							3	3
	HSSL VSSL	HSSL VSSL	0-15 0-15	12 8							12 8	12 8
	BGPS	BGPS	0-15	4							4	4
		BGPW	0-15	10							10	10
135	ADCK	ADCLKS	0-3	3							3	3
		NSDSW	0-1	1							1	1
		FREE_RUN	0-1	0	ļ						0	0
		RVS CONTRAST	0-1 0-127	0 45	 						0 45	0 45
		U-DAC	0-127	16	 						16	16
		V-DAC	0-127	24	t						24	24
142	PHUE		0-31	15							15	15
	PKIL	KILLER	1	0							0	0
		EXT_SC_SEL	0-3	2							2	2
	PHIM		0-1	0							0	0
	PSUB PBGS	BG_START	0-1 0-63	0 14	 						0 14	0 14
	PDL0	50_01/AK1	0-63	6	 						6	6
	PDL1		0-15	13	t						13	13
		Y_OFFSET	0-31	25							25	25
151	PVP1			0	<u> </u>						0	0
	PUP1			0							0	0
	PVP2			0	ļ						0	0
	PUP2			0	-						0	0
	PVP3 PUP3			0	-				 		0	0
		SET_ACC	0.1		 		 	 	1			
	PACS	SET ACC	0-1	1							1	1

				FIX	NTSC				NTSC		AVERAGE DATA	AVERAGE DATA
Reg #	ITEM	FUNCTION	RANGE	DATA	27	PAL M	PAL N	VIDEO	32	RF	27FV	32FS
159	PDCO		0-3	0							0	0
160	PCGA	C_GAIN	0-1	1							1	1
161	PAAF		0-1	0							0	0
162	PSU2		0-1	0							0	0
163	PCVF		0-1	0							0	0
164	PBIT	BITSEL	0-1	0							0	0
165	PAFC	AFCBITSEL	0-1	0							0	0
166	PACC	ACC_LEVEL	0-63	22							22	22
167	PBUR	BURST_CLK	0-1	0							0	0
168	PEVE	EVENUPRA	0-1	0							0	0
169	PINW	INV_WFF	0-1	0							0	0
170	PINR	INV_REF	0-1	0							0	0
171	PREF	RFF_FIX	0-1	0							0	0
172	PARE	AUTO_REF	0-1	1							1	1
173	PAVE	AVERAGE	0-1	0							0	0
174	PFRA	FREE_RUN_ADJ	0-15	0							0	0
175	PPAL	SUB_PALM_JUDGE	0-255	0							0	0
176	PHPO		0-31	6							7	6
177	PVPO		0-31	22							22	22
178	PHTI	HT	0-15	7							9	9
179	PHAJ	ADJ	0-15	1							1	1
180	PBGY	BGY	0-15	0							0	0
181	PCRO	CROSS_SEL	0-1	0							0	0
182	PPAR	PALRY	0-63	2							2	2
183	PHPF	HPFOFF	0-1	0							0	0
184	PFSC	FSC_OUTPUT	0-1	0							0	0
185	PVCH	SET_VCHIP	0-1	0							0	0
186	PVON	VCHIP_ONLY	0-1	1							1	1
187	PVLN	LINE_NUM	0-31	17							17	17
188	PVSB	STB_DLY	0-255	64							64	64
189	PVLV	L_LEVEL	0-255	130							130	130
190	SBAL	Sub Balance	0-7	5							5	5
191	SBAS	Sub Bass	0-7	0							0	0
192	STRE	Sub Trebble	0-7	3	****						3	3
193	BBEL	BBE Low	0-15	0							0	0
194	BBEH	BBE High	0-15	0	****						0	0
195	BBE	BBE	0-1	0	*****						0	0
196	AUX	SRS, Simulated	0-3	0	0						0	0
197	DISP	O.S.D Display position	0-127	20							32	34
198	HCLW	Horizontal Count lower limit	0-255	16				16			16	16
199	HCHG	Horizontal Count High limit	0-255	64				64			64	64
200	ID0		0-255	89							See ID Map	
201	ID1		0-255	31							See ID Map	
202	ID2		0-255	79							See ID Map	
203	ID3		0-255	146							See ID Map	
204	ID4		0-255	137							See ID Map	
205	ID5		0-255	19							See ID Map	
206	ID6		0-255	0		l	l	l			See ID Map	

^{*} CDMD = 3 for US & CND, CDMD = 0 for Other



Notes:

No. 1–206 show the order that each adjustment mode may be selected while in service mode. Data Range shows the range of possible settings for each adjustment mode. Initial Data shows the standard settings for each adjustment mode.

Feature ID Map

Model	Destination	ID-0	ID-1	ID-2	ID-3	ID-4	ID-5	ID-6
KV-27FV16	US	89	63	239	146	133	19	7
KV-27FV16	CND	89	63	239	178	133	19	7
KV-29FV16	Е	17	63	255	130	229	19	7
KV-29FV16C	Е	17	63	255	130	229	19	7
KV-32FS12	US	89	31	79	146	137	19	0
KV-32FS12	CND	89	31	79	178	137	19	0
KV-32FS16	US	89	31	79	146	137	19	7
KV-32FS16	CND	89	31	79	178	137	19	7

^{**} FIFR = 3 for NTSC models, FIFR = 1 for Trinorma models

^{*** 41} for 27FS/32FS families, 31 for 27FV family

^{****} BBEL = 5 for 27FV family; 6 for 29FV family and 0 for 32FS family

^{*****} BBEH = 5 for 27FV family; 7 for 29FV family and 0 for 32FS family

^{******} BBE = 1 for 27FV/29FV families and 0 for 32FS family

5-4. MA BOARD ADJUSTMENTS

H. Frequency (Free Run) Check

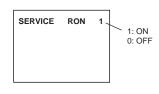
- 1. Input a TV mode (RF) with no signal.
- 2. Connect a frequency counter to base of Q501 (TP-500 H. DRIVE) on the A Board.
- 3. Check H. Frequency for $15735 \pm 200 \text{ Hz}$

V. Frequency (Free Run) Check

- 1. Select video 1 with no signal input.
- 2. Set the conditions for a standard setting.
- 3. Connect the frequency counter to TP-508 (V OUT) or CN501pin (6) (V DY+) and ground on the A Board.
- 4. Check that V. Frequency shows 60 ± 4 Hz.

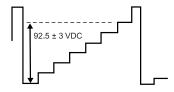
Drive (RDRV)

- 1. Input a color-bar signal and set the level to 75%.
- In Standard mode, set PICTURE to maximum and COLOR to minimum.
- 3. Activate the Service Adjustment Mode.
- 4. Set both GON and BON items. Using 3 and 6; set each to the following values. Leave RON set to "1".



R ON: ON (1) G ON: OFF (0) B ON: OFF (0)

- Connect an oscilloscope probe to CA Board, J701 Pin 12 (KR) (Red Out).
- 6. Select RDRV with 1 and 4.
- 7. Adjust the value of RDRV with $\boxed{3}$ and $\boxed{6}$ for 92.5 ± 3 VDC.



8. Reset GON and BON values to "1".

R ON: ON (1) G ON: ON (1) B ON: ON (1)

9. Reset Picture and Color to normal values:

PICTURE: MAX COLOR: CENTER

10. Press MUTING then ENTER to save into the memory.

Display Position Adjustment (DISP)

- 1. Input a color-bar signal.
- 2. Set to Service Adjustment Mode.
- 3. Select DISP with 1 and 4.
- 4. Adjust values of DISP with 3 and 6 to adjust characters to the center.
- 5. Write to memory by pressing MUTING then ENTER.
- 6. Check to see if the text is displayed on the screen.

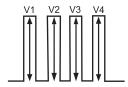


Sub Bright Adjustment (SBRT)

- 1. Input a monoscope signal.
- 2. Activate the Service Adjustment Mode.
- 3. Set the PICTURE and BRIGHTNESS to minimum.
- 4. Select the SBRT item with 1 and 4.
- 5. Adjust the values of SBRT with 3 and 6 to obtain a faintly visible crosshatch.
- 6. Press MUTING then ENTER to save into the memory.

Sub Hue, Sub Color Adjustment (CHUE, CCOL)

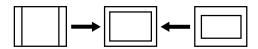
- 1. Input a color-bar signal and set level to 75%.
- 2. Activate the Service Adjustment Mode.
- 3. Connect an oscilloscope probe to CA Board, CN705 Pin (4).
- 4. Select the CHUE and CCOL item with 1 and 4.
- 5. While showing the CHUE item, adjust the waveform with 3 and 6 until the second and third bars show the same level (V2 = V3 < 0.1 Vp-p).
- 6. While showing the CCOL item, adjust the waveform with $\boxed{3}$ and $\boxed{6}$ until the first and fourth bars show the same level (V1 = V4 < 0.1 Vp-p).



7. Press MUTING then ENTER to save into the memory.

V. Size Adjustment (VSIZ)

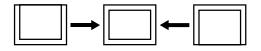
- 1. Input a crosshatch signal.
- 2. Activate the Service Adjustment Mode.
- 3. Select the VSIZ item with 1 and 4.
- 4. Adjust value of VPOS with 3 and 6 for the best vertical center.
- 5. Press MUTING then ENTER to save into the memory.



V. Center Adjustment (VPOS)

Perform this adjustment after performing H. Frequency (Free Run) Check.

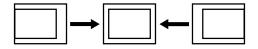
- 1. Input a crosshatch signal.
- 2. Activate the Service Adjustment Mode.
- 3. Select the VPOS item with 1 and 4.
- 4. Adjust value of VPOS with 3 and 6 for the best vertical center.
- 5. Press MUTING then ENTER to save into the memory.



H. Center Adjustment (HPOS)

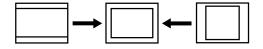
Perform this adjustment after performing H. Frequency (Free Run) Check.

- 1. Input a crosshatch signal.
- 2. Activate the Service Adjustment Mode.
- 3. Select the HPOS item with 1 and 4.
- 4. Adjust the value of HPOS with 3 and 6 for the best horizontal center.
- 5. Press MUTING then ENTER to save into the memory.



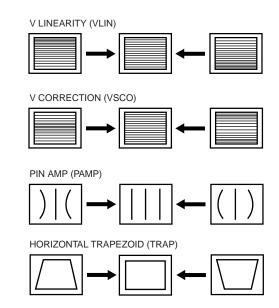
H. Size Adjustment (HSIZ)

- 1. Input a monoscope signal.
- 2. Activate the Service Adjustment Mode.
- 3. Select HSIZ with 1 and 4.
- 4. Adjust with 3 and 6 for the best horizontal size.
- 5. Press MUTING then ENTER to save into the memory.



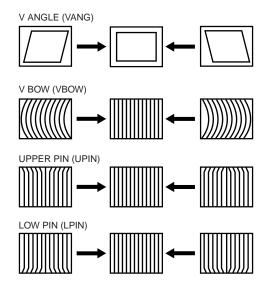
V. Linearity (VLIN), V. Correction (VSCO), Pin Amp (PAMP), and Horizontal Trapezoid (TRAP) Adjustments

- 1. Input a crosshatch signal.
- 2. Activate the Service Adjustment Mode.
- 3. Select VLIN, VSCO, PAMP, and PPHA with with 1 and 4.
- 4. Adjust with 3 and 6 for the best horizontal size.
- 5. Press MUTING then ENTER to save into the memory.



V. Angle (VANG), V. Bow (VBOW), Upper pin (UPIN) and Low Pin (LPIN) Adjustments

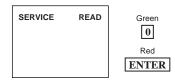
- 1. Input a crosshatch signal.
- 2. Activate the Service Adjustment Mode.
- 3. Select VANG, VBOW, UPIN, and LPIN with 1 and 4.
- 4. Adjust with 3 and 6 for the best picture.
- 5. Press MUTING then ENTER to save into the memory.



Service Adjustment Mode Memory

- 1. Change the value of the DCOL item to "1".
- 2. After completing all adjustments, press 0 then ENTER.

Read From Memory



KV-27FV16/29FV16/29FV16C/32FS12/32FS16

NOTES:	

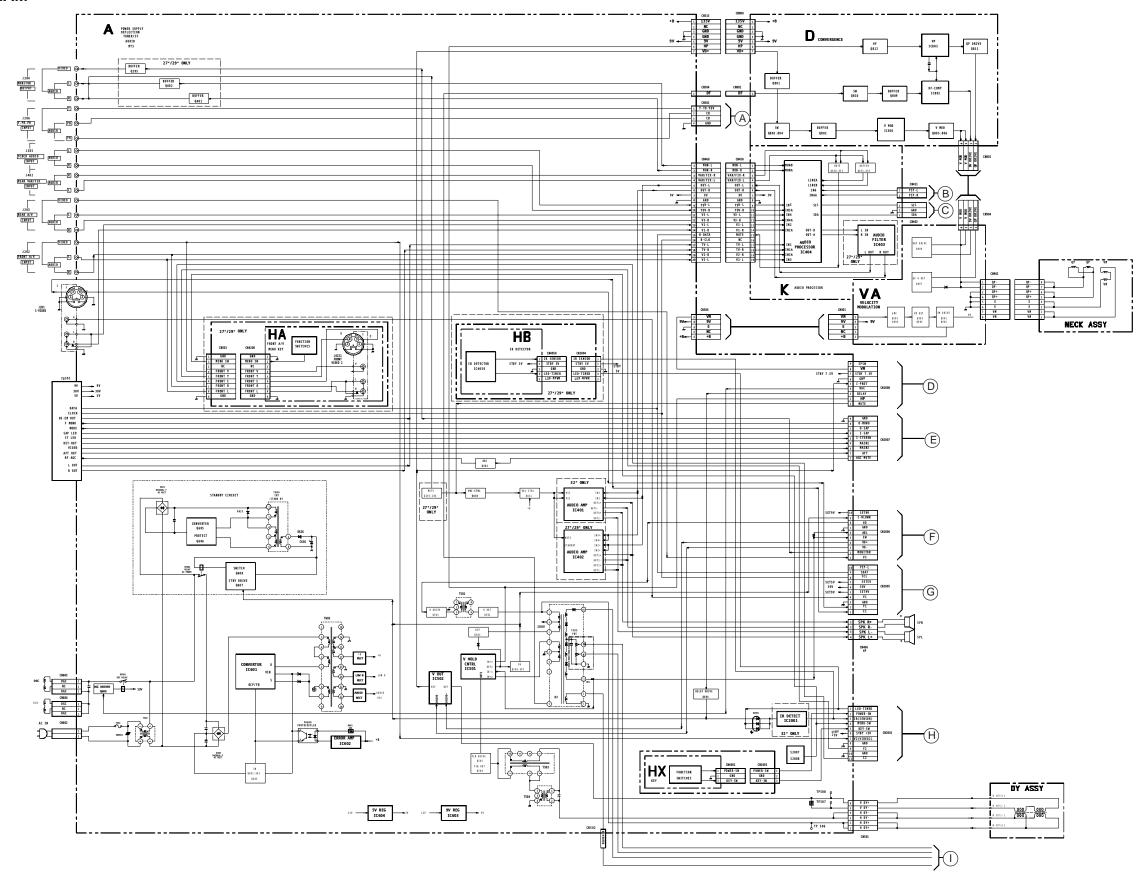
NOTES:	

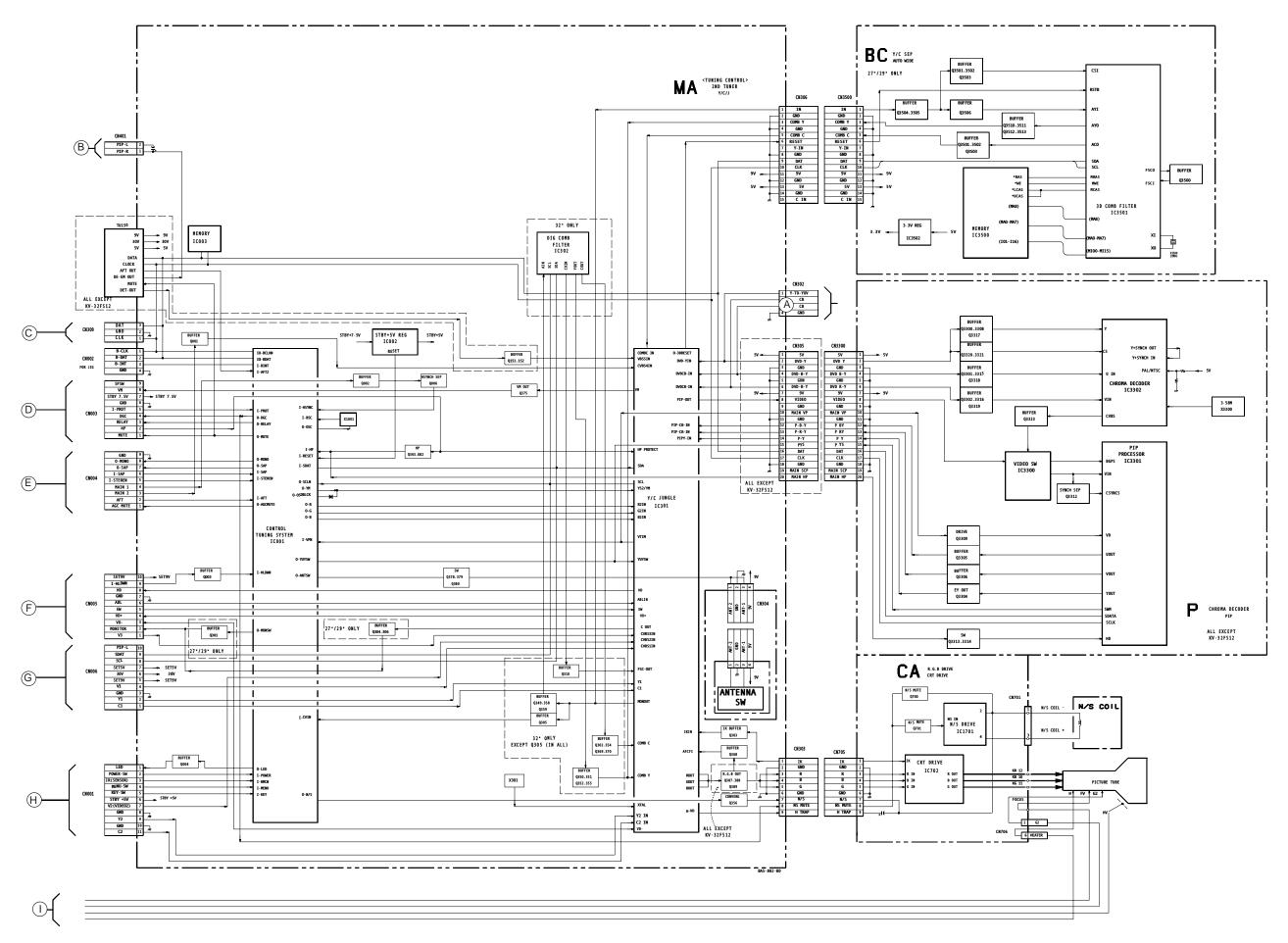
KV-27FV16/29FV16/29FV16C/32FS12/32FS16

NOTES:		

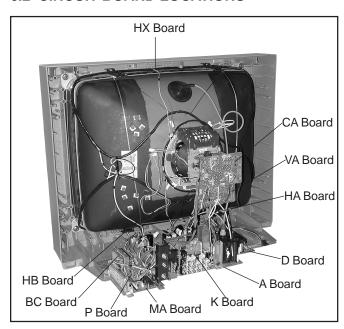
SECTION 6 DIAGRAMS

6.1 BLOCK DIAGRAM





6.2 CIRCUIT BOARD LOCATIONS



6-3. PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

- All capacitors are in μF unless otherwise noted. pF: μμF 50 WV or less are not indicated except for electrolytic and tantalums.
- All electrolytics are 50V unless otherwise specified.
- Indication of resistance, which does not have one for rating electrical power, is as follows:

Pitch: 5mm

Rating electrical power 1/4W (CHIP: 1/10W)

• All resistors are in ohms.

 $K\Omega = 1000\Omega$ $M\Omega = 1000K\Omega$

• _ : nonflammable resistor

• +w-- : fusible resistor

• \ : internal component

• _____ : panel designation and adjustment for repair

• $\frac{1}{1}$: earth-chassis

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- The components identified by \blacksquare in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.
- When replacing components identified by ✓, make the necessary adjustments indicated. If results do not meet the specified value, change the component identified by ✓ and repeat the adjustment until the specified value is achieved (refer to Safety Related Adjustments on page 20).
- When replacing parts shown in the table below, be sure to perform the related adjustments.

Part Replaced (☑)	Adjustment (►)
DY, T505, CRT, IC501, C507, C520, C505, C509, C515, T504, T503, C551, L510, C546, C537, C547, D517, D518, D519, R560, R561, R562, R563, R565, R566, R567, R525	HV HOLD-DOWN (R564)
	1
IC601, PH601A Board	B+ VOLTAGE CONFIRMATION

- All voltages are in Volts
- Voltage is DC with respect to ground unless otherwise noted.
- Readings are taken with a $10M\Omega$ digital multimeter.
- Readings are taken with a color-bar signal input.
- Voltage variations may be noted due to normal production tolerance.
- Circled numbers are waveform references.

* : cannot be measured

: B + Line
 : B - Line
 : Signal path

Reference Information

COIL CAPACITOR		RN RC FPRD FUSE RW RS RB RB FP LF-8L TA PS PP PT MPS MPP	METAL FILM SOLID NON FLAMMABLE CARBON NON FLAMMABLE FUSIBLE NON FLAMMABLE WIREWOUND NON FLAMMABLE METAL OXIDE NON FLAMMABLE CEMENT ADJUSTMENT RESISTOR MICRO INDUCTOR TANTALUM STYROL POLYPROPYLENE MYLAR METALIZED POLYESTER METALIZED POLYPROPYLENE
	:	MPS	METALIZED POLYESTER
	:	ALB	BIPOLAR
	:	ALT ALR	HIGH TEMPERATURE HIGH RIPPI F
Note:	•	/ \LI\	THOTTIMITEE

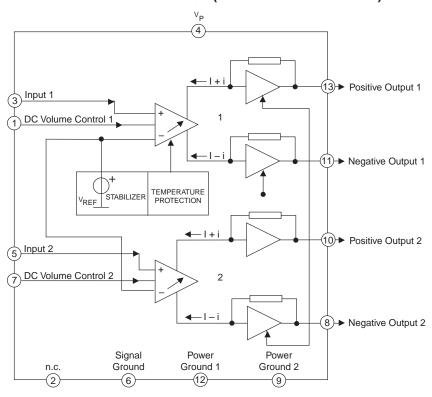
The components identified by shading and ${\mathbin{\triangle}}\,$ mark are critical for safety. Replace only with the part number specified.

The symbol \iff (displayed on component side of the circuit board) indicates fast operating fuse. Replace only with fuse of the same rating as marked.

Les composants identifiés per un tramé et une marque \triangle sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié. Le symbole \longrightarrow indique une fusible a action rapide. Doit etre remplacee par une fusible de meme yaleur, comme marque.

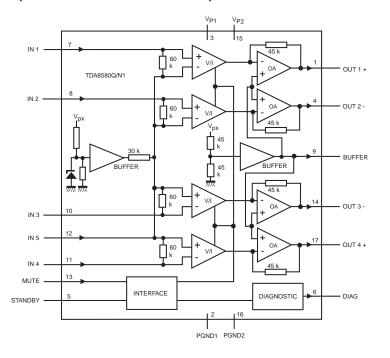
A BOARD IC BLOCK DIAGRAMS

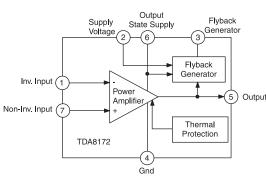
A BOARD: IC401 TDA7057AQ/2 (KV-32FS12/32FS16 ONLY)



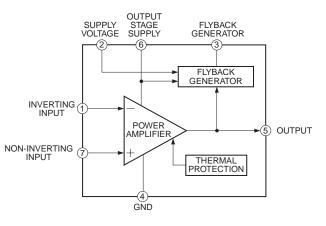
A BOARD: IC502 TDA8172 (ALL EXCEPT 32FS12/32FS16)

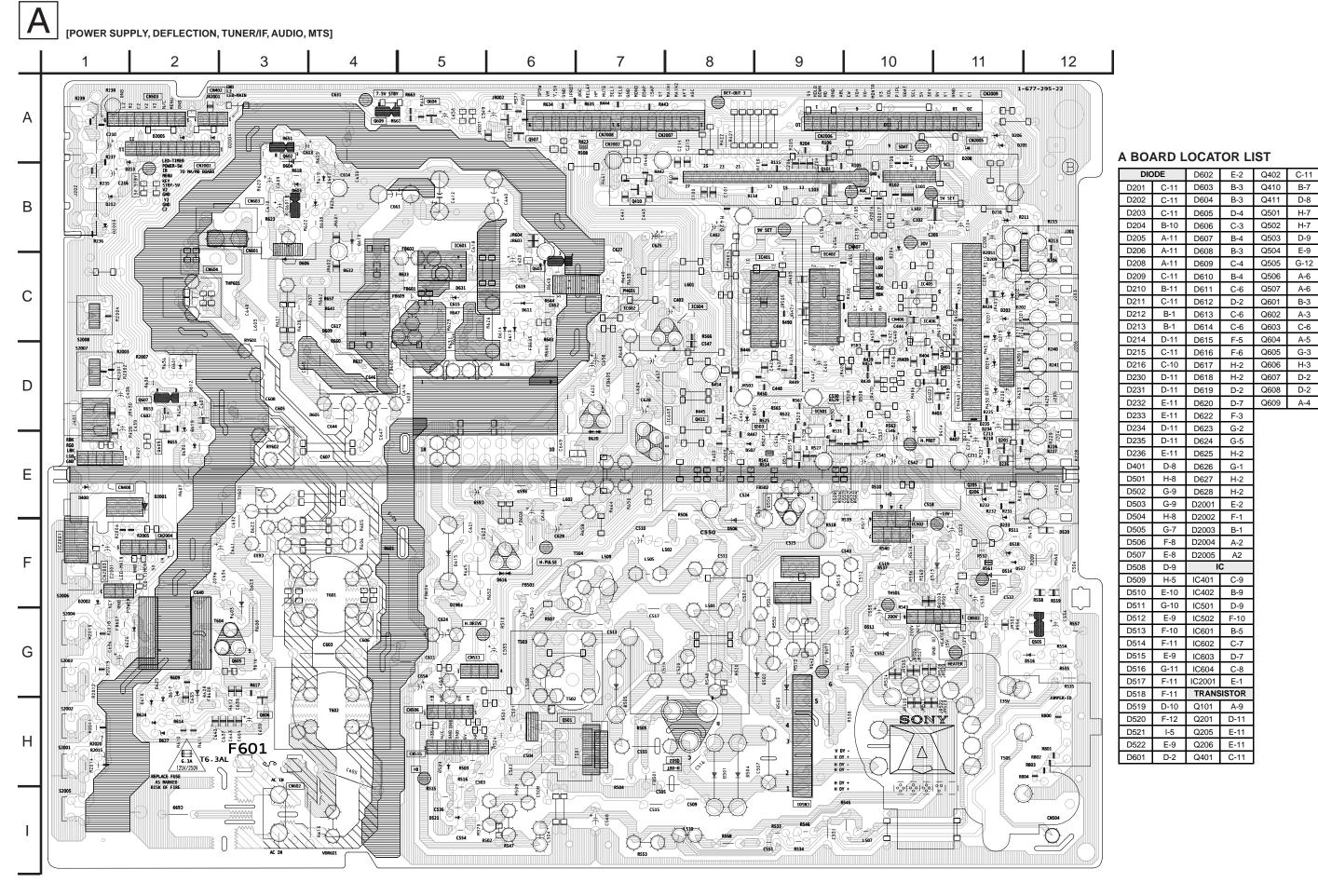
A BOARD: IC402 TDA8580Q/N1 (ALL EXCEPT 32FS12/32FS16)

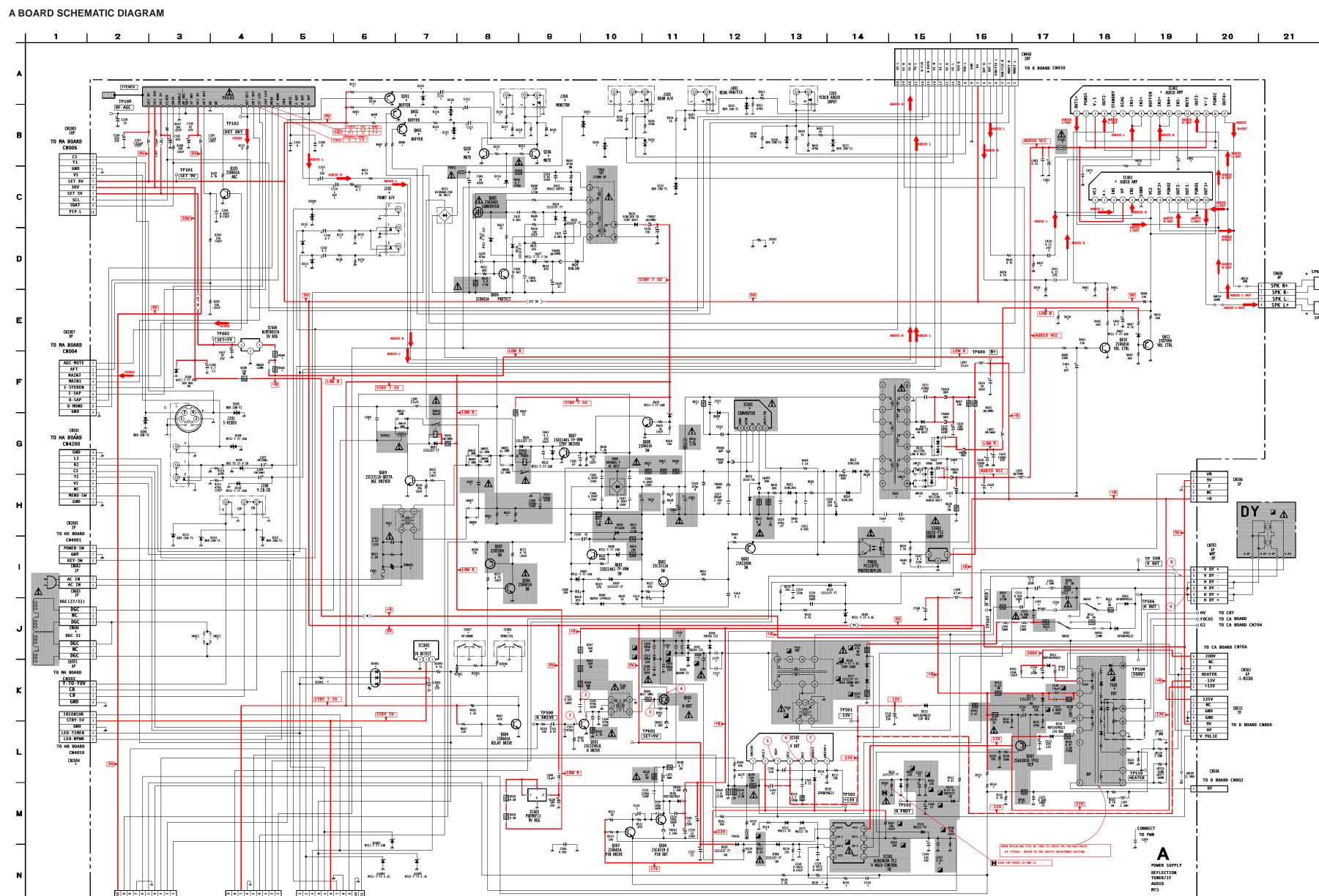




A BOARD: IC502 STV9379 (KV-32FS12/32FS16 ONLY)







F NO.	LOC.	KV-27FV16	KV-29FV16 KV-29FV16C	KV-32FS12 KV-32FS16	REF NO.	LOC.	KV-27FV16	KV-29FV16 KV-29FV16C	KV-32FS12 KV-32FS16
211	A-7	470 16V	470	#	Q205	B-8	2SD601A-QRS-TX	2SD601A-QRS-TX	#
212	A-8	4.7	4.7	#	Q206	B-9	2SD601A-QRS-TX	2SD601A-QRS-TX	#
213	B-8	4.7	4.7	#	Q401	B-7	2SB709A-QRS-TX	2SB709A-QRS-TX	#
401	B-19	100	100	#	Q402	B-6	2SB709A-QRS-TX	2SB709A-QRS-TX	#
402	B-17	1000	1000	2200 25V	Q502	K-11	2SD2578-YB	2SD2578-YB	2SD2580-YE
435	C-18	.22 25V	.22 25V	#	R218	A-6	100	100	#
507	K-11	17000PF 1.2KV	17000PF 1.2KV	22000PF 1.2KV	R221	A-6	220	220	#
511	J-17	1 250V	1 250V	.82 250V	R224	B-7	4.7K	4.7K	#
514	K-11	.68 250V	.68 250V	.82 250V	R225	B-7	4.7K	4.7K	#
517	K-11	#	#	0.1	R226	B-8	75	75	#
520	K-11	.047 630V	.047 630V	.051 400V	R227	B-8	470K	470K	#
530	N-14	0.0022	0.0022	0.001	R228	B-8	470K	470K	#
548	J-15	22 160V	22 160V	100 160V	R229	B-9	470K	470K	#
550	J-17	.1 250V	.1 250V	.47 250V	R231	B-8	6.8K	6.8K	#
555	K-11	2700PF 1.2KV	2700PF 1.2KV	4700PF 1.2KV	R232	B-8	6.8K	6.8K	#
607	H-7	.47 125V	.47 300V	.47 125V	R235	D-6	#	#	470K
612	H-11	820 250V	#	820 250V	R237	C-6	#	#	220
615	F-12	#	0.022	#	R238	D-6	#	#	220
616	F-12	#	220PF	#	R239	D-6	#	#	470K
625	H-16	1000	1000	1000	R401	D-18	20K	20K	#
630	H-14	.0047 250V	#	.0047 250V	R402	D-18	10K	10K	#
631	H-15	.0047 250V	#	.0047 250V	R403	B-6	4.7K	4.7K	#
648	G-6	.22 125V	.22 300V	.22 125V	R404	B-6	4.7K	4.7K	#
649	H-15	.0047 500V	0.0047	#	R407	B-6	100	100	#
658	H-16	1000	1000	1000 25V	R408	B-6	100	100	#
660	H-11	#	330 400V	#	R420	F-17	#	#	3.9K
661	H-11	#	330 400V	#	R437	E-17	10K	10K	4.7K
699	N-19	.0047 250V	#	.0047 250V	R439	E-17	10K	10K	4.7K
N503	G-1	9P	9P	#	R518	L-13	6.8K	6.8K	5.6K
V604	J-1	#	#	3P	R519	L-12	6.8K	6.8K	5.6K
12001	N-5	11P	11P	8P	R513	J-17	22 3W	22 3W	10 3W
2004	K-1	5P	5P	#	R514	M-12	22K	22K	8.2K
201	C-10	RD9.1EW-T1	RD9.1EW-T1	#	R529	N-14	330K	330K	270K
202	C-11	RD9.1EW-T1	RD9.1EW-T1	#	R530	N-14	15K	15K	18K
203	C-10	RD9.1EW-T1	RD9.1EW-T1	#	R533	M-16	33K	33K	22K
212	D-5	#	#	MTZJ-T7710B	R534	M-16	36K	36K	33K
213	D-5	#	#	MTZJ-T7710B	R564	M-14	180K	180K	56K
216	C-8	100	100	#	R601	H-8	4.7M 1/2W	#	4.7M 1/2W
234	B-7	UDZ-TE-17-9.1B	UDZ-TE-17-9.1B	#	R615	I-8	#	8.2M 1W	#
235	B-7	UDZ-TE-17-9.1B	UDZ-TE-17-9.1B	#	R627	H-11	390K	270K	390K
236	B-7	UDZ-TE-17-9.1B	UDZ-TE-17-9.1B	#	R628	H-11	#	270K	270K
609	G-12	#	RU-1P	#	R631	F-12	#	100K 3W	#
2001	K-6	#	#	LNK0120022G	R637	H-11	#	5.6K 3W	#
2003	C-5	#	#	RD9.1EW-T1	R638	H-14	33	56	33
601	I-6	6.3A/125V	6.3A/250V	6.3A/125V	R646	H-13	1.5K	1.2K	1.5K
401	B-18	#	#	TDA7057AQ/N2	R648	E-4	4.7 3W	4.7 3W	33 3W
402	A-17	TDA8580Q/N1	TDA8580Q/N1	#	R660	H-11	15K 3W	5.6K	15K 3W
502	L-12	TDA8172	TDA8172	STV9379	R662	H-11	#	5.6K 3W	#
601	G-12	STR-F6626	STR-F6656	STR-F6626	R664	F-4	4.7 3W	4.7 3W	#
2001	J-7	#	#	SBX3081-71	R2001	K-8	#	#	2.2K
202	C-6	#	#	3P	R2002	K-8	#	#	1.5K
204	A-8	3P	3P	#	R2004	J-8	#	#	6.8K
615	G-15	#	#	5MM	R2005	K-5	#	#	0
616	G-15	#	#	5MM	S2007	J-7	#	#	1-762-816-1
/617	G-15	5MM	5MM	#	S2008	J-8	#	#	1-762-816-11
/618	G-15	5MM	5MM	#	T504	L-13	1-431-693-11	1-431-693-11	1-435-098-11
/621	J-3	7.5MM	7.5MM	#	T505	K-18	8-598-834-20	8-598-834-20	8-598-824-10
/622	J-3	7.5MM	7.5MM	#	T602	H-6	1-435-617-11	1-435-402-11	1-435-617-11
505	J17	150UH	150UH	68UH	T603	F-14	1-435-403-11	1-435-402-11	1-435-403-11
3401	B-17	1-532-686-21	1-532-686-21	1-576-336-21	VDR601	I-6	1-803-585-11	1-803-967-11	1-803-585-11
701	A-6	2SB709A-QRS-TX	2SB709A-QRS-TX	#		. 0	. 555 555 11	. 555 567 11	#: Not Mounted

A BOARD IC VOLTAGE LIST

										_								
IC.	401	12	0.0	10	4.1	4	GND	7	7 2.1 IC603		C603 IC2001		2001	7	5.5	20	5.0	
pin	volt	13	6.9 11 4.1		4.1	5	9.5	IC	601	pin	volt	pin	volt	8	2.1	21	0.3	
1	0.6	IC4	402	12	4.1	6	10.1	pin	volt	1	13.3	1	5	9	8.9	22	0.0	
2	0.0	pin	volt	13	5.2	7	0.1	1	-31.8	2	8.9	2	5	10	4.1	23	0.0	
3	2.4	1	6.8	14	6.8	8	14.0	2	-32.7	3	GND	3	GND	11	0.0	24	0.0	
4	14.3	2	GND	15	14.1	IC	502	3	53.2	4	13.3	TU101		12	N/C	25	0.0	
5	2.4	3	14.1	16	GND	pin	volt	4	-23.8	IC	604	pin	volt	13	N/C	26	4.5	
6	0.0	4	6.8	17	6.8	1	2.1	5	-32.7	pin	volt	1	8.6	14	N/C	27	4.5	
7	0.6	5	4.3	IC	501	2	14.0	IC	602	1	13.3	2	30.7	15	N/C	All volta	All voltages are in V	
8	6.9	6	NC	pin	volt	3	-12.6	pin	volt	2	5.0	3	5.1	16	N/C			
9	0.0	7	4.1	1	0.2	4	-13.9	1	135.9	3	GND	4	4.9	17	4.7			
10	6.9	8	4.1	2	3.7	5	0.2	2	123.4			5	4.9	18	4.4			
11	6.9	9	6.8	3	2.5	6	14.3	3	GND			6	GND	19	5.0			

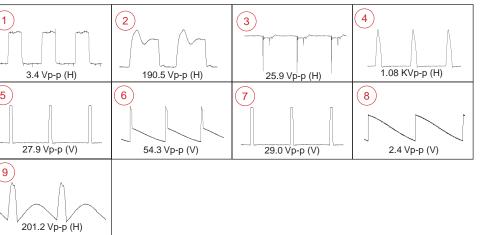
BOARD	TRANS	SISTOR	VOLT	AGE	LIST	Γ

Q (,00	
pin	volt	
D	-35.6	
G	40.8	
S	36.8	
All volta		

A BOARD TRANSISTOR VOLTAGE LIST

Q	101	Q4	1 01	Q5	501	Q!	505	Qe	602	Qe	07
pin	volt	pin	volt	pin	volt	pin	volt	pin	volt	pin	volt
В	0.0	В	4.5	В	0.0	В	134.9	В	-32.8	В	0.7
С	5.6	С	GND	С	93.3	С	1.8	С	-23.6	С	0.1
Е	GND	Е	0.1	E	GND	E	135.5	E	-32.9	E	GND
Q2	201	Q4	102	Q5	502	Q!	506	Qe	603	Q608	
pin	volt	pin	volt	pin	volt	pin	volt	pin	volt	pin	volt
В	8.6	В	4.5	В	-0.1	В	0.0	В	-23.6	В	0.0
С	GND	С	GND	С	133.0	С	0.0	С	-31.2	С	0.7
Е	9.0	Е	0.2	Е	GND	Е	GND	Е	-23.6	Е	GND
Q2	205	Q4	110	Q5	503	Q!	507	Qe	604	Qe	09
pin	volt	pin	volt	pin	volt	pin	volt	pin	volt	pin	volt
В	-0.4	В	0.0	В	0.2	В	0.0	В	0.1	В	0.0
С	0.0	С	5.2	С	3.8	С	0.0	С	4.1	С	13.9
Е	GND	Е	GND	Е	GND	Е	0.0	Е	GND	Е	GND
Q2	206	Q4	111	Q5	504	Q	601	Qe	606	All voltag	ges are in V
pin	volt	pin	volt	pin	volt	pin	volt	pin	volt		
В	-0.4	В	5.3	В	0.1	В	-33.0	В	-36.1		
С	0.0	С	GND	С	-6.5	С	-33.0	С	-35.3		

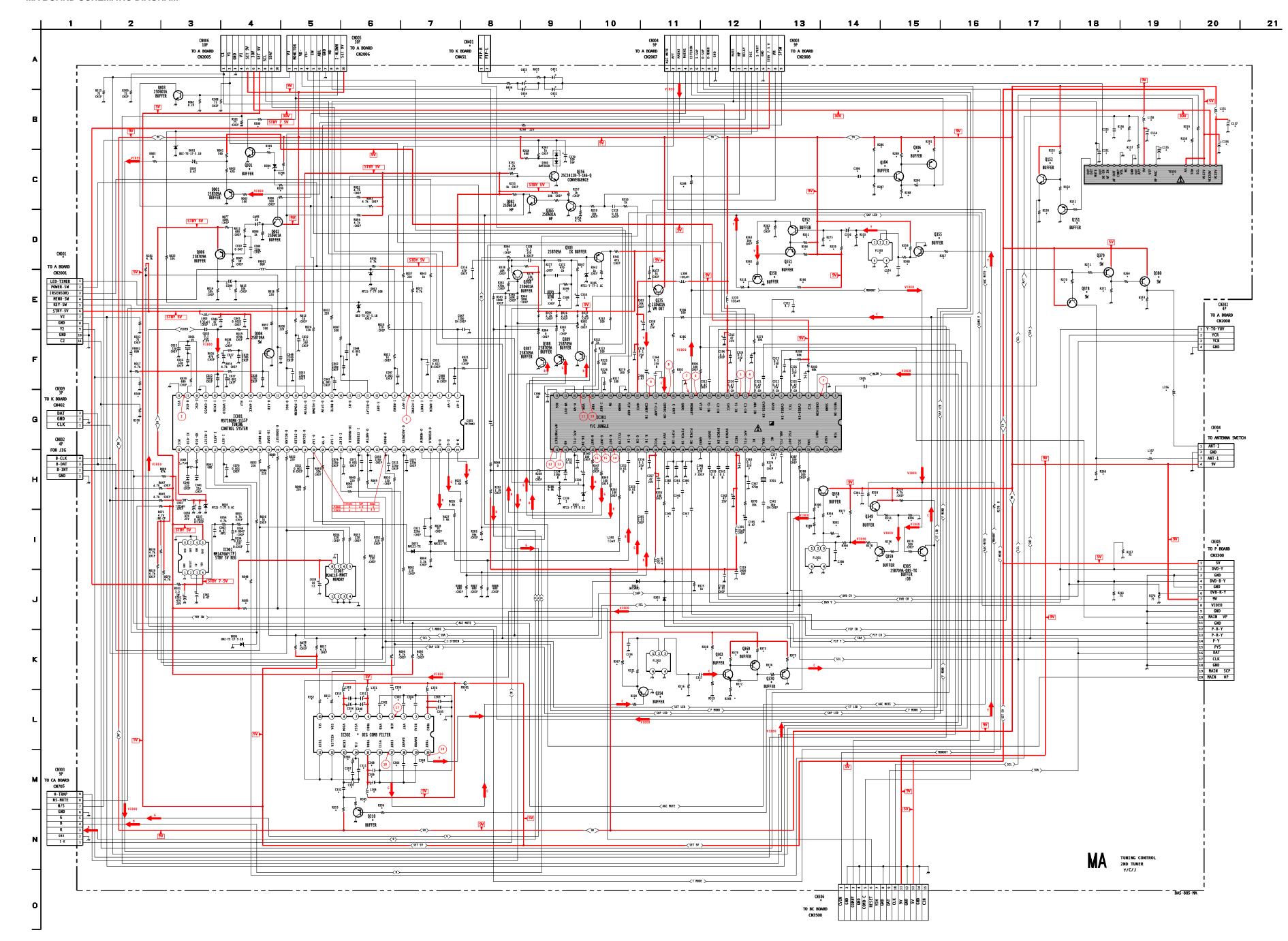
A BOARD WAVEFORMS



← A Board MA Board →

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MA BOARD SCHEMATIC DIAGRAM



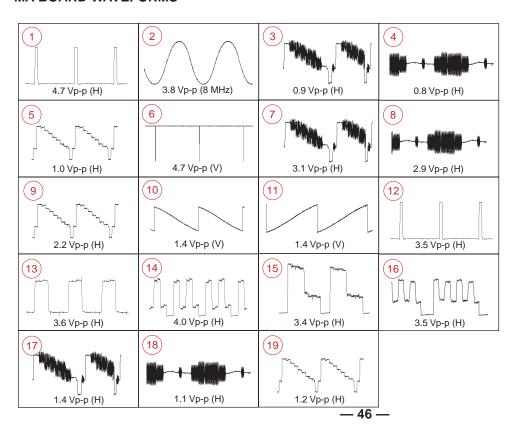
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MA BOARD MARK (*) LIST

		KV-27FV16 KV-29FV16					KV-27FV16 KV-29FV16		
REF NO.		KV-29FV16C	KV-32FS12	KV-32FS16	REF NO.		KV-29FV16C	KV-32FS12	KV-32FS16
C005	F-14	.47 25V	#	.47 25V	Q379	E-19	2SB709A-QRS-TX	#	2SB709A-QRS-TX
C151 C153	C-18 B-18	0.0047	#	0.0047	Q380 R048	E-19 J-3	2SB709A-QRS-TX 100	#	2SB709A-QRS-TX 100
C154	B-19	47	#	47	R069	H-6	220	#	220
C155	C-19	10	#	10	R085	J-3	4.7K	#	#
C156	C-20	47 25V	#	47 25V	R089	H-4	220	#	#
C157	B-20	100	#	100	R150	D-17	1.5K	#	1.5K
C302 C303	L-6 L-6	#	0.01 0.01	0.01 0.01	R151 R154	D-18 D-17	100 560	#	100 560
C304	L-6	#	0.01	0.01	R155	C-17	560	#	560
C305	L-7	#	100 16V	100 16V	R156	B-17	33K	#	33K
C306	C-14	1 16V	#	#	R157	C-19	22K	#	22K
C307	M-5	#	10PF	10PF	R158	C-20	100	#	100
C308	M-6	#	0.01	0.01	R159 R264	B-20 E-19	100 22K	#	100 22K
C309 C311	M-6 M-6	#	100 16V 180PF	100 16V 180PF	R266	H-18	22K	#	22K
C314	K-10	#	15PF	15PF	R270	E-18	22K	#	22K
C317	K-11	#	0.01	0.01	R271	E-18	22K	#	22K
C324	F-15	#	15PF	15PF	R272	E-18	22K	#	22K
C332	M-5	#	0.0012	0.0012	R275	D-14	#	22K	22K
C336	D-14	#	47 25V 100 16V	47 25V 100 16V	R277 R284	E-9 C-11	2.2M 1K	3.3M #	3.3M #
C340 C345	L-6 I-11	# 0.01	#	0.01	R285	F-11	1K	#	#
C345	I-11	0.01	#	0.01	R286	C-14	47K	#	#
C347	I-11	0.01	#	0.01	R287	C-14	100K	#	#
C350	L-6	#	0.47	0.47	R288	C-15	470	#	#
C351	L-6	#	0.01	0.01	R289	C-15	1K	#	#
C354	L-6	#	100 16V	100 16V	R290	C-15	560	#	#
C355 C366	L-6 H-10	#	0.01 0.01	0.01 0.01	R291 R298	C-15 C-4	1.5K 4.7K	#	#
C368	M-7	#	0.01	0.01	R299	C-4	220	#	#
C369	L-7	#	0.01	0.01	R300	H-13	#	0	0
C380	I-11	#	0.01	#	R302	F-11	5MM	#	#
C381	I-11	#	0.01	#	R305	N-6	#	0	0
C382	I-11	#	0.01	#	R307	D-10	8.2K	#	#
C389 C390	E-9 I-14	0.033	0.047 15PF	0.047 15PF	R311 R314	E-12 E-19	# 22K	100 #	100 22K
C390	H-14	#	100 16V	100 16V	R316	K-11	#	5.6K	5.6K
C397	M-6	#	0.01	0.01	R317	D-15	#	100	100
C451	A-9	1 16V	#	1 16V	R318	K-12	#	56K	56K
C452	A-9	1 16V	#	1 16V	R319	K-12	#	22K	22K
C453	A-9	1 16V	#	1 16V	R320	K-11	#	100	100
C454	A-9	1 16V	#	1 16V	R321 R328	K-11 I-14	#	560 100	560 100
CN001 CN304	E-1 G-20	11P 4P	8P #	8P 4P	R331	D-13	#	1K	160 1K
CN304	J-20	20P	#	20P	R333	D-14	#	5.6K	5.6K
CN306	0-14	15P	#	#	R334	I-14	#	100	100
CN401	A-8	2P	#	2P	R339	D-13	#	56K	56K
D303	J-11	1SS133T-77	#	1SS133T-77	R348	F-2	75	#	#
D304 FB301	C-4 L-7	MTZJ-T-77-3.3 #	# OUH	# 0UH	R350 R351	G-2 I-14	75 #	# 470	# 470
FL301	I-13	#	1-239-847-11	1-239-847-11	R352	1-14 L-5	#	100	100
FL302	K-11	#	1-239-847-11	1-239-847-11	R353	L-5	#	100	100
FL303	D-14	#	1-239-847-11	1-239-847-11	R354	I-14	#	100	100
IC301	G-9	8-752-098-86	8-752-094-98	8-752-098-86	R355	N-5	#	1.5K	1.5K
IC302	L-5	#	TC90A49P	TC90A49P	R359	D-14	#	2.2K	2.2K
L150 L151	B-19 B-20	10UH 100UH	#	10UH 100UH	R364 R365	D-13 E-12	#	100 100	100 100
L303	L-5	#	# 10UH	10UH	R366	E-12	#	1.5K	1.5K
L304	M-6	#	10UH	10UH	R367	K-11	#	2.2K	2.2K
L350	L-7	#	10UH	10UH	R368	D-14	#	560	560
L351	L-6	#	10UH	10UH	R369	K-12	#	220	220
L356	G-19	0	#	0	R372	K-12	#	560	560
L357 Q151	H-19 C-18	0 2SB709A-QRS-TX	#	0 2SB709A-QRS-TX	R373 R374	K-12 K-13	#	100 100	100 100
Q151	C-16	2SD601A-QRS-TX	#	2SD601A-QRS-TX	R375	K-13	#	1.5K	1.5K
Q301	B-4	2SD601A-QRS-TX	#	#	R377	H-13	#	2.2K	2.2K
Q302	K-12	#	2SD601A-QRS-TX	2SD601A-QRS-TX	R378	I-14	#	0	0
Q304	C-15	2SD601A-QRS-TX	#	#	R379	K-12	#	1K	1K
Q306	C-15	2SD601A-QRS-TX	# 0007004 ODE TV	# 2007004 OD6 TV	R380	B-4	0	#	#
Q310 Q349	N-6 I-14	#	2SB709A-QRS-TX 2SD601A-QRS-TX	2SB709A-QRS-TX 2SD601A-QRS-TX	R381 R386	C-4 M-6	6.8K #	# 820	# 820
Q349 Q350	E-12	#	2SB709A-QRS-TX	2SB709A-QRS-TX	R389	I-13	#	820 1K	820 1K
Q351	D-13	#	2SB709A-QRS-TX	2SB709A-QRS-TX	R392	I-14	#	5.6K	5.6K
Q352	D-13	#	2SD601A-QRS-TX	2SD601A-QRS-TX	R394	I-14	#	560	560
Q354	K-11	#	2SB709A-QRS-TX	2SB709A-QRS-TX	R395	I-15	#	560	560
Q355	D-14	#	2SB709A-QRS-TX	2SB709A-QRS-TX	R396	N-6	#	100	100
Q358 Q359	H-13	#	2SD601A-QRS-TX	2SD601A-QRS-TX	R398 R399	E-9	56K 330K	330K 39K	330K 39K
Q359 Q369	I-14 K-12	#	2SB709A-QRS-TX 2SB709A-QRS-TX	2SB709A-QRS-TX 2SB709A-QRS-TX	R399 R434	E-9 A-8	4.7K	39K #	4.7K
Q309 Q370	K-12	#	2SB709A-QRS-TX	2SB709A-QRS-TX	R434	A-9	4.7K	#	4.7K
Q378	E-18	2SB709A-QRS-TX	#	2SB709A-QRS-TX	TU150	C-18	FSS BTF-FA402	#	FSS BTF-FA402
_									#: Not Mounted

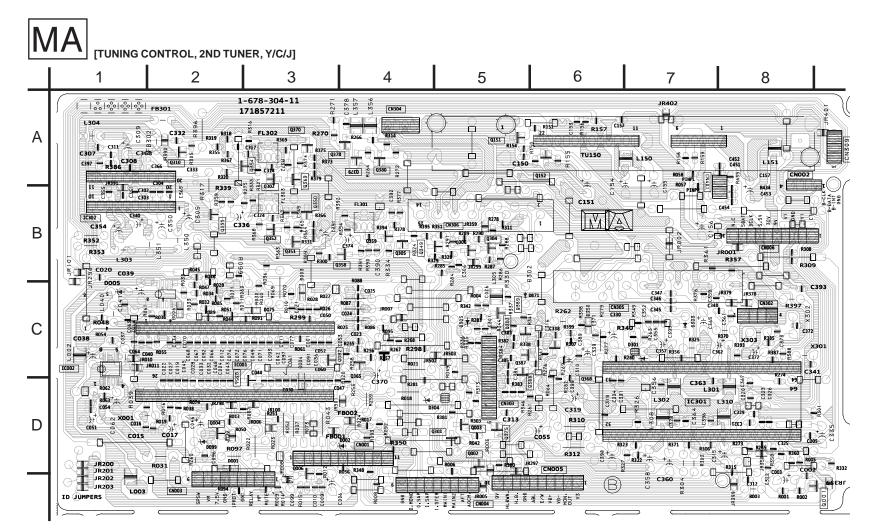
MA BOARD WAVEFORMS

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MA BOARD TRANSISTOR VOLTAGE LIST

Q	001	Q1	151	Q	305	Q:	352	Q	365	Q:	379
pin	volt	pin	volt								
В	5.0	В	4.0	В	4.4	В	2.5	В	0.5	В	4.4
С	GND	С	GND	С	GND	С	7.8	С	3.8	С	5.1
Е	5.6	Е	4.6	Е	5.0	Е	1.9	Е	0.0	Е	5.1
Q	002	Q1	152	Q	306	Q:	354	Q	368	Q:	380
pin	volt	pin	volt								
В	4.4	В	6.8	В	9.0	В	2.5	В	2.4	В	5.1
С	9.0	С	9.0	С	8.8	С	GND	С	9.0	С	0.0
Е	3.8	Е	6.2	Е	9.0	Е	3.2	Е	2.4	Е	5.1
Q	003	Q	301	Q	310	Q:	355	Q	369 Q387		387
pin	volt	pin	volt								
В	0.6	В	0.7	В	4.8	В	0.0	В	7.6	В	1.9
С	0.0	С	0.0	С	GND	С	GND	С	5.8	С	GNE
Ε	GND	Е	GND	Е	5.4	Е	3.0	Е	8.3	Е	2.5
Q	Q004		Q302		349	Q:	356	Q	370	Q	388
pin	volt	pin	volt								
В	4.9	В	2.5	В	4.4	В	0.5	В	5.8	В	1.9
С	GND	С	7.6	С	9.0	С	1.3	С	GND	С	GNE
Е	3.9	Е	1.9	Е	3.8	Е	GND	Е	6.4	Е	2.5
Q	006	Q	303	Q	350	Q:	358	Q	375	Q	389
pin	volt	pin	volt								
В	5.2	В	3.6	В	4.0	В	2.4	В	5.0	В	2.0
С	0.7	С	0.1	С	GND	С	8.9	С	9.0	С	GNE
Е	5.0	Е	3.5	Е	4.7	Е	1.8	Е	4.4	Е	2.6
Q	Q082		304	Q	351	Q:	359	Q	378	All volta	ges are i
pin	volt										
В	0.6	В	8.9	В	7.8	В	2.1	В	4.3		
С	0.5	С	9.0	С	4.0	С	GND	С	4.9		
Е	GND	Е	8.8	Е	8.4	Е	2.7	Е	5.1		



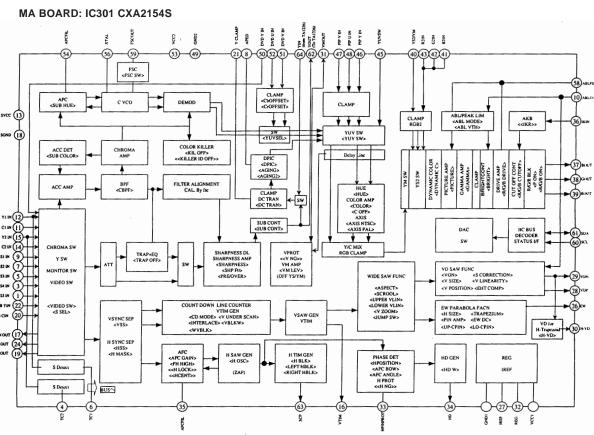
MA BOARD IC VOLTAGE LIST

IC	001	19	4.3	39	NC	59	NC	3	GND	13	8.9	33	3.6	53	9.0	8	5	6	5.1
pin	volt	20	0.1	40	NC	60	NC	4	GND	14	NC	34	2.3	54	5.3	9	4.9	7	NC
1	0.5	21	NC	41	NC	61	0.1	5	4.8	15	NC	35	2.3	55	1.6	10	4.9	8	NC
2	4.8	22	5.0	42	4.8	62	0.1	6	4.8	16	4.8	36	3.9	56	1.7	11	0	9	NC
3	NC	23	NC	43	4.8	63	0.1	7	GND	17	4.4	37	1.9	57	1.1	12	0	10	NC
4	5.0	24	5.0	44	NC	64	0.1	8	5.0	18	GND	38	1.9	58	7.2	13	2.5	11	7.5
5	0.0	25	2.1	45	4.8	IC	002	IC	301	19	NC	39	2.0	59	4.8	14	2.1	12	NC
6	0.0	26	NC	46	NC	pin	volt	pin	volt	20	6.4	40	0.0	60	4.8	15	5	13	9.0
7	2.4	27	0.3	47	4.8	1	GND	1	5.9	21	3.9	41	4.6	61	4.8	16	0	14	5.3
8	4.4	28	2.2	48	0.1	2	5.0	2	GND	22	5.6	42	4.6	62	NC	17	2.5	15	GND
9	NC	29	GND	49	0.1	3	4.9	3	5.2	23	8.9	43	4.6	63	NC	18	3.2	16	NC
10	NC	30	2.2	50	5.0	4	7.2	4	5.0	24	5.7	44	8.9	64	NC	19	1.9	17	GND
11	0.1	31	2.3	51	5.0	5	5.0	5	4.8	25	GND	45	0.2	IC	302	20	2.4	18	NC
12	NC	32	GND	52	NC	6	GND	6	5.0	26	3.5	46	4.3	1	5	TU	150	19	NC
13	0.5	33	5.0	53	1.0	7	GND	7	4.8	27	2.4	47	5.2	2	1.4	pin	volt	20	2.0
14	NC	34	2.5	54	0.1	8	NC	8	3.4	28	3.5	48	5.2	3	3.2	1	9.0	21	0.3
15	0.1	35	2.5	55	NC	IC	003	9	4.8	29	3.5	49	GND	4	2.4	2	3.0	22	4.0
16	0.1	36	5.0	56	1.0	pin	volt	10	1.7	30	5.9	50	4.8	5	1.9	3	5.0	All volta	ges are in V
17	0.0	37	3.1	57	NC	1	GND	11	0.0	31	5.5	51	5.2	6	5	4	4.8		
18	0.1	38	5.0	58	0.1	2	GND	12	4.8	32	7.6	52	5.2	7	0	5	4.8		

MA BOARD LOCATOR LIST

DIC	DDE	D006	C-2	D305	B-5	IC301	D-7	Q004	D-2	Q302	A-3	Q349	C-4	Q356	D-3	Q370	A-3	Q388	B-5
D001	D-2	D075	C-3	D360	B-4	IC302	B-1	Q006	D-3	Q303	C-5	Q350	B-3	Q358	B-4	Q375	B-5	Q389	C-5
D002	D-4	D301	C-7	10	С	TRANS	SISTOR	Q082	B-3	Q304	B-5	Q351	B-3	Q359	B-4	Q378	A-3	CRY	STAL
D003	C-3	D302	C-5	IC001	C-2	Q001	D-8	Q151	A-5	Q305	B-4	Q352	B-3	Q365	C-4	Q379	A-4	X001	D-1
D004	D-3	D303	C-7	IC002	C-1	Q002	D-5	Q152	A-6	Q306	B-5	Q354	A-3	Q368	C-6	Q380	A-4	X301	C-8
D005	C-1	D304	D-4	IC003	C-2	Q003	D-5	Q301	D-4	Q310	B-3	Q355	B-2	Q369	B-3	Q387	C-5		

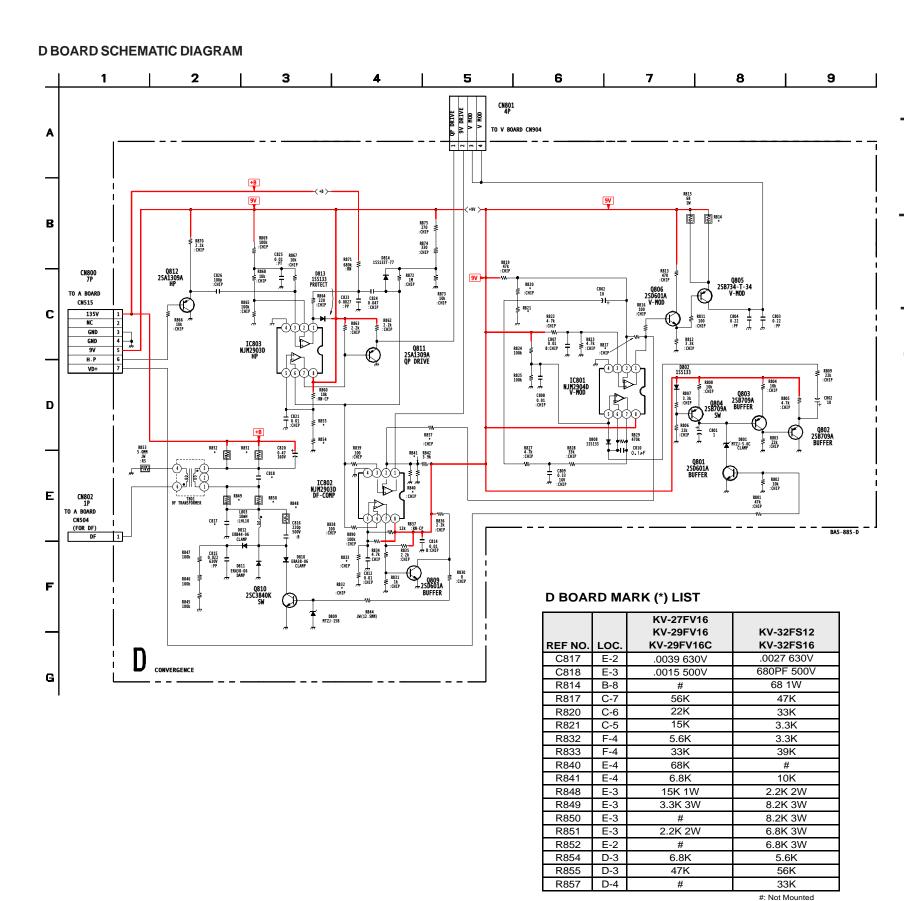
MA BOARD IC BLOCK DIAGRAMS

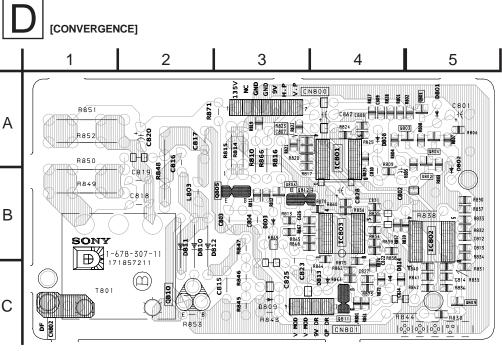


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[RGB DRIVE, CRT DRIVE] CA BOARD SCHEMATIC DIAGRAM **CA BOARD WAVEFORMS** 3 Q701 3 8 R721 Α Α 132.8V p-p (H) 135.9V p-p (H) 140.6V p-p (H) R716 100k 1/2W CRT (T505) G2 TO A BOARD В В CA BOARD MARK (*) LIST KV-27FV16 KV-29FV16 KV-32FS12 TAB (CONTACT) KV-29FV16C KV-32FS16 TP702 REF NO. LOC. R717 A-2 2.2 2W R714 100 ≥ 1/2W 3.3 2W R718 A-2 C #: Not Mounted R712 R713 1k 1k 1k 1/2W ₹ 1/2W R711 1k 1/2W TO MA BOARD CN303 L701 + C705 68#H 10 250V D R709 100 R710 D **HX BOARD SCHEMATIC DIAGRAM** 3 2 SONY R700 + C709 22k T 16V HX 1-678-305-11 171857211 "RGB & TILT AMP." KEY N.C. GND HEATER -13V +13V C704 4.7 250V Ε -13V CN4001 3P WHT-L :S-MICRO TO A BOARD 0701 W 25C3311A NS MUTE C708 I R702 R702 R702 RMPS I 220 CN2003 1 POWER-SW В N/S COIL R704 2 - 2k COIL-S4005 S4004 CH+ S4003 CH-S4002 VOL+ R705 10k BA5-885-HX -13V R707 6 SONY Α 171857211 □□ R4003 THE THE 54001 54002 54003 R4002 R4003 R4004 S4004 P4005 54006 В ← MA Board CA & HX Boards →

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D BOARD TRANSISTOR VOLTAGE LIST

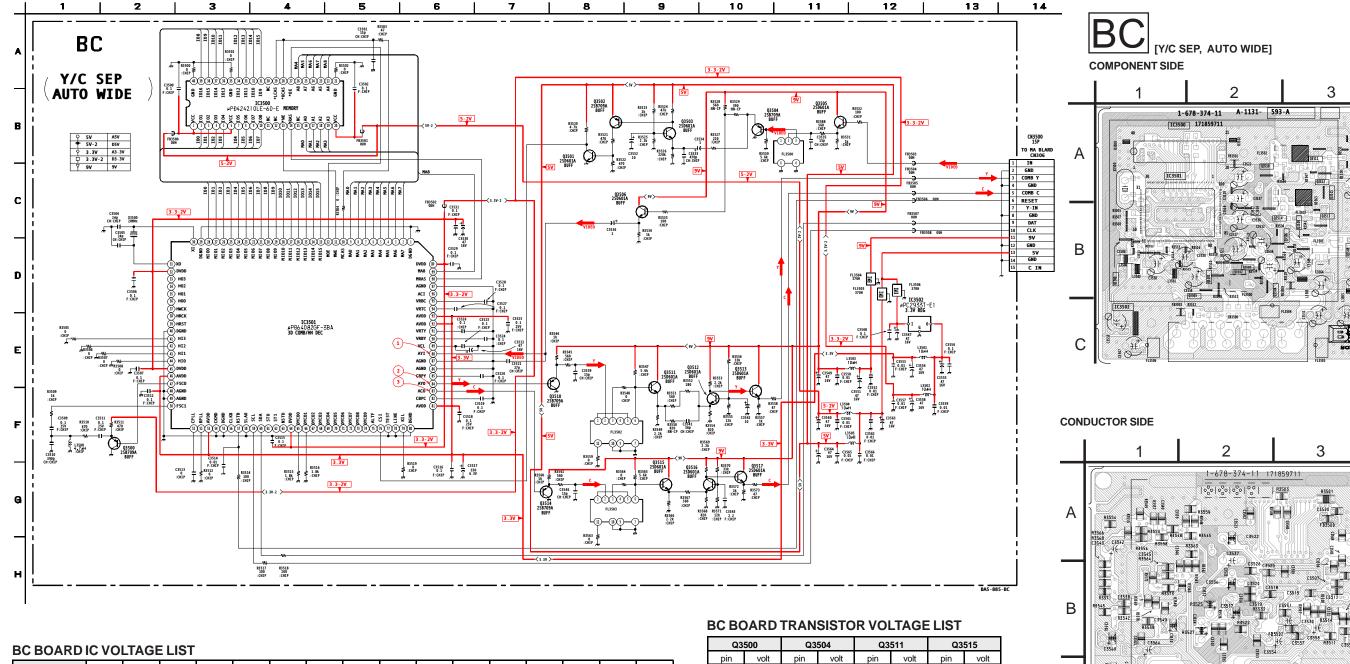
Q8	301	Q8	806		
pin	volt	pin	volt		
В	-2.2	В	7.3		
С	3.4	С	8.1		
Е	GND	Е	6.7		
Q	302	Q8	809		
pin	volt	pin	volt		
В	4.3	В	0.3		
С	GND	С	0.3		
Е	4.9	Е	GND		
Q	303	Q810			
pin	volt	pin	volt		
В	6.4	В	0.3		
С	4.3	С	1.2		
Е	7.0	Е	GND		
Q	304	Q811			
pin	volt	pin	volt		
В	7.4	В	6.3		
С	6.4	С	GND		
E	7.9	Е	6.4		
Q	Q805		312		
pin	volt	pin	volt		
В	6.7	В	0.0		
С	0.6	С	GND		
Е	7.3	Е	0.6		

All voltages are in V

D BOARD IC VOLTAGE LIST

IC8	301	IC8	303
pin	volt	pin	volt
1	7.3	1	2.3
2	4.4	2	4.3
3	4.5	3	4.7
4	GND	4	GND
5	4.5	5	7.6
6	4.5	6	6.7
7	4.5	7	6.0
8	9.0	8	9.0
IC8	302	All volta	ges are in V
pin	volt		
1	6.8		
2	5.7		
3	0.0		
4	GND		
5	6.8		
6	6.7		
7	3.2		
8	9.0		

BC BOARD SCHEMATIC DIAGRAM

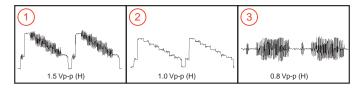


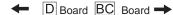
IC3	500	16	1.5	33	1.1	8	1.5	25	0.9	42	0.0	59	4.8	76	3.3	93	3.3
pin	volt	17	1.5	34	1.1	9	1.5	26	0.9	43	0.0	60	4.8	77	GND	94	3.3
1	5.0	18	1.5	35	GND	10	1.0	27	0.9	44	0.0	61	NC	78	GND	95	2.0
2	0.8	19	1.5	36	1.1	11	2.9	28	0.8	45	3.3	62	NC	79	0.0	96	NC
3	0.9	20	5.0	37	1.1	12	2.4	29	GND	46	3.3	63	NC	80	GND	97	0.0
4	0.9	21	GND	38	1.0	13	0.3	30	1.5	47	1.8	64	3.3	81	3.3	98	0.5
5	0.9	22	1.6	39	0.1	14	1.1	31	1.6	48	GND	65	0.7	82	1.1	99	1.6
6	5.0	23	1.5	40	GND	15	1.1	32	3.3	49	GND	66	1.5	83	1.7	100	3.3
7	0.8	24	1.5	IC3	501	16	1.1	33	NC	50	1.5	67	NC	84	1.4	IC	3501
8	0.7	25	1.5	pin	volt	17	1.1	34	NC	51	0.0	68	NC	85	1.1	pin	volt
9	1.4	26	1.5	1	GND	18	1.1	35	NC	52	0.0	69	NC	86	0.0	G	GND
10	1.1	27	2.4	2	1.5	19	1.0	36	NC	53	3.3	70	NC	87	0.0	ı	5.0
11	NC	28	1.1	3	1.5	20	0.1	37	NC	54	GND	71	NC	88	0.9	0	3.3
12	NC	29	1.1	4	1.5	21	1.1	38	NC	55	GND	72	NC	89	0.9	All volta	iges are in V
13	2.9	30	0.0	5	1.5	22	1.4	39	NC	56	NC	73	NC	90	1.0		
14	0.5	31	0.3	6	1.5	23	0.7	40	GND	57	3.3	74	NC	91	1.6		
15	NC:	32	1 1	7	1.5	24	0.8	41	0.0	58	GND	75	NC.	92	3.3		

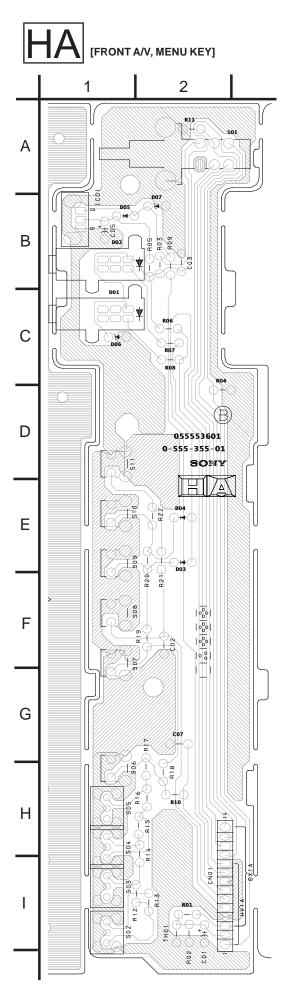
BC BOARD TRANSISTOR VOLTAGE LIST										
Q3	500	Q3	504	Q3	511	Q3	515			
pin	volt	pin	volt	pin	volt	pin	volt			
В	1.8	В	3.9	В	3.0	В	3.0			
С	0.0	С	GND	С	8.9	С	8.9			
Е	2.4	Е	4.5	Е	2.4	Е	2.3			
Q3501		Q3505		Q3	512	Q3516				
pin	volt	pin	volt	pin	volt	pin	volt			
В	0.2	В	5.0	В	2.3	В	2.4			
С	3.3	С	8.9	С	5.5	С	6.5			
Е	GND	Е	4.3	Е	1.7	Е	1.7			
Q3	502	Q3506		Q3513		Q3	517			
pin	volt	pin	volt	pin	volt	pin	volt			
В	4.7	В	6.3	В	5.5	В	6.5			
С	0.8	С	8.9	С	8.9	С	8.9			
Е	5.0	Е	5.7	Е	4.9	Е	5.8			
Q3503		Q3	510	Q3	514	All volta	ges are in V			
pin	volt	pin	volt	pin	volt					
В	3.5	В	1.4	В	1.7					
С	4.7	С	GND	С	0.0					

3.7 E 2.1 E 2.4

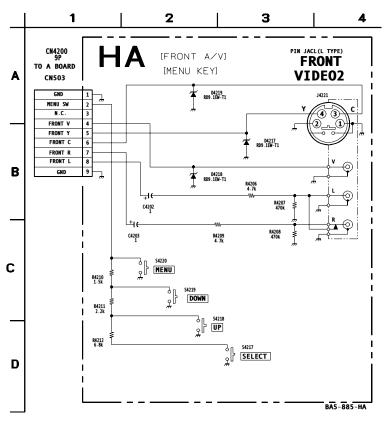
BC BOARD WAVEFORMS



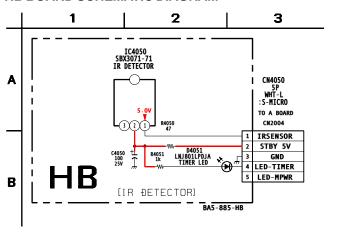


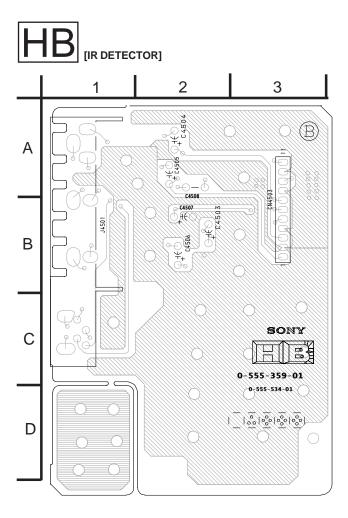


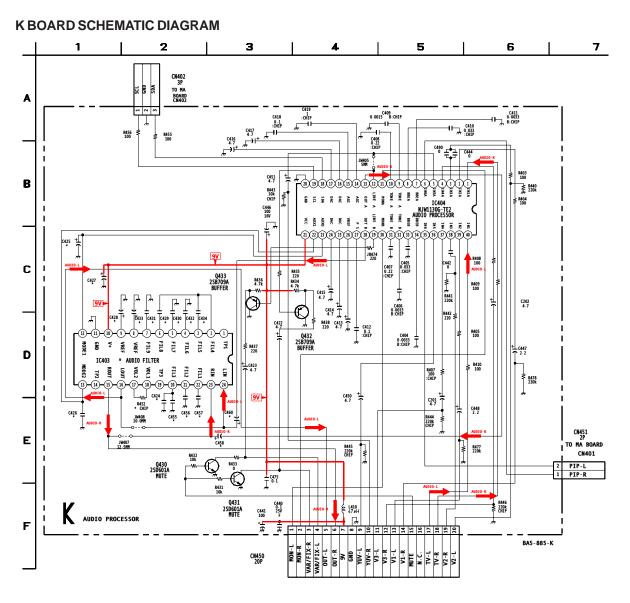
HA BOARD SCHEMATIC DIAGRAM

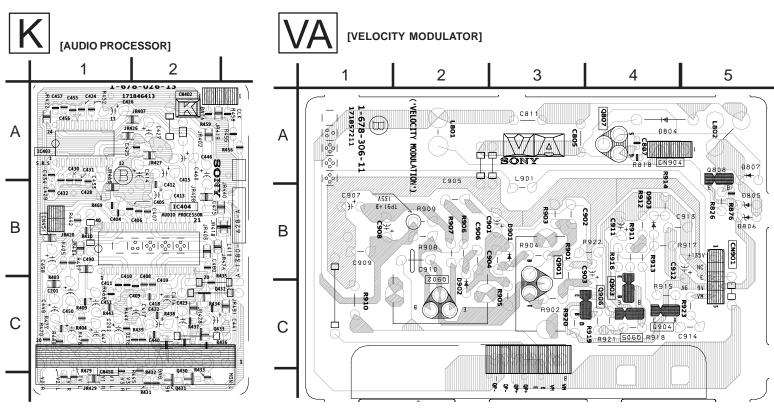


HB BOARD SCHEMATIC DIAGRAM









K BOARD TRANSISTOR VOLTAGE LIST

Q430		Q4	l31	Q4	32	Q433			
pin	volt	pin	volt	pin	volt	pin	volt		
В	0.3	В	0.3	В	4.5	В	4.5		
С	0.0	С	0.0	С	GND	С	GND		
Е	GND	E	GND	E	5.1	E	5.2		
	All voltages are in V								

VA BOARD MARK(*) LIST

REF NO.	LOC.	KV-27FV16 KV-29FV16 KV-29FV16C	KV-32FS12 KV-32FS16
C805	B-6	.033UF 200V	.01UF 630V
C811	A-6	.047UF 200V	.082UF 200V

#: Not Mounted

K BOARD IC VOLTAGE LIST

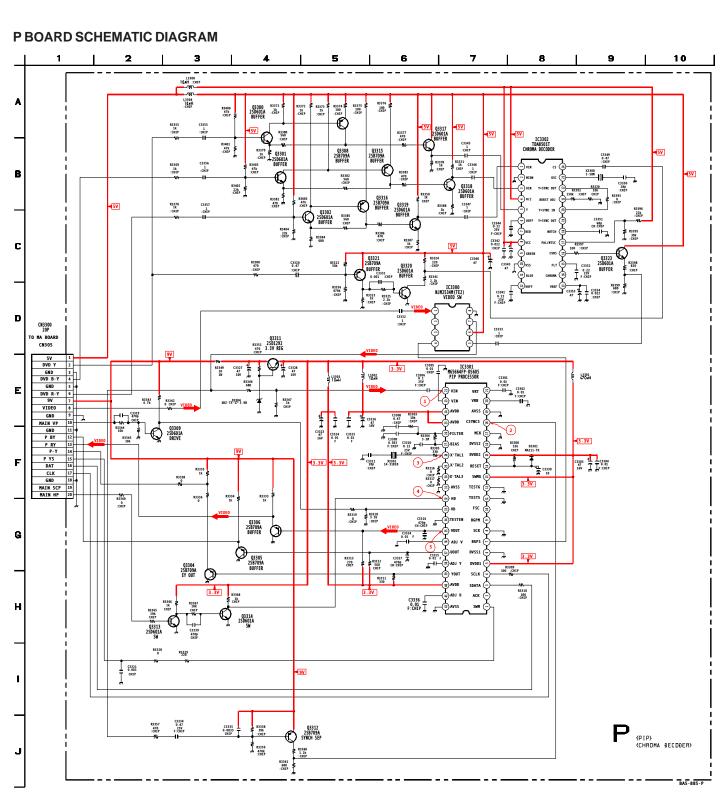
N BOARD IC VOLIAGE LIST											
IC	403	16	4.5	7	4.7	24	1.3				
pin	volt	17	4.5	8	4.5	25	1.3				
1	NC	18	4.5	9	4.5	26	4.4				
2	4.5	19	NC	10	4.5	27	3.9				
3	4.5	20	4.5	11	NC	28	4.5				
4	4.5	21	4.5	12	4.5	29	4.5				
5	4.5	22	4.5	13	4.5	30	NC				
6	4.5	23	4.5	14	1.0	31	4.5				
7	4.5	24	4.5	15	4.5	32	4.5				
8	4.5	IC4	404	16	0.9	33	4.5				
9	4.5	pin	volt	17	0.9	34	4.5				
10	9.0	1	4.5	18	4.8	35	NC				
11	GND	2	4.5	19	4.9	36	4.5				
12	0	3	4.5	20	GND	37	4.5				
13	0	4	4.5	21	8.9	38	4.5				
14	NC	5	4.5	22	NC	39	4.5				
15	4.5	6	NC	23	NC	40	4.5				

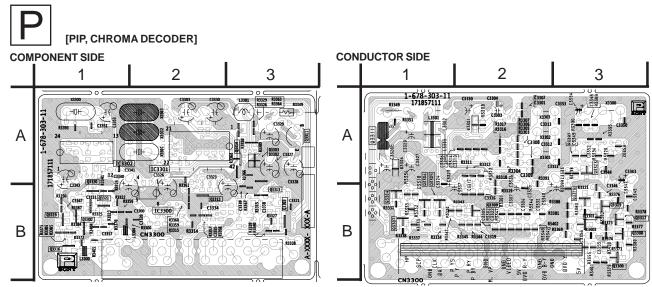
K BOARD MARK (*) LIST

REF NO.	LOC.	KV-27FV16 KV-29FV16 KV-29FV16C	KV-32FS12 KV-32FS16
C424	E-2	.47 25V	#
C425	C-1	1 16V	#
C426	E-2	1	#
C427	C-1	100	#
C428	D-2	100	#
C429	D-2	0.0047	#
C430	D-2	.22 25V	#
C431	D-2	.1 25V	#
C432	D-2	0.01	#
C433	D-2	1 16V	#
C434	D-2	.1 25V	#
C455	E-2	.4725V	#
C456	E-2	0.01	#
C457	E-2	0.033	#
C458	E-3	4.7	#
C460	E-3	4.7	#
IC403	D-1	NJM2198-TE2	#
R452	E-2	10K	#

← HA & HB Boards K & VA Boards →

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P BOARD IC VOLTAGE LIST

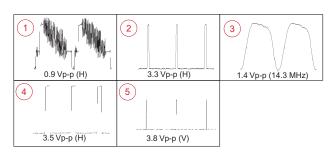
I DOA	RDIC	VOLI	AGEL	
IC3	300	29	0.0	
pin	volt	30	0.0	
1	2.6	31	0.0	
2	NC	32	0.5	
3	NC	33	0.0	
4	0.0	34	GND	
5	2.6	35	3.1	
6	5.0	36	1.1	
7	1.8	37	3.0	
8	GND	38	1.2	
IC3	301	39	2.6	
pin	volt	40	3.5	
1	0.2	41	1.0	
2	GND	42	GND	
3	4.7	IC3	302	
4	4.8	pin	volt	
5	3.2	1	0.0	
6	GND	2	GND	
7	0.0	3	0.0	
8	GND	4	5.0	
9	NC	5	0.3	
10	NC	6	2.0	
11	GND	7	NC	
12	GND	8	5.1	
13	3.2	9	NC	
14	3.2	10	GND	
15	3.2	11	NC	
16	GND	12	2.0	
17	GND	13	2.5	
18	0.3	14	NC	
19	GND	15	0.8	
20	0.5	16	1.7	
21	1.6	17	3.3	
22	1.0	18	1.7	
23	0.6	19	NC	
24	3.4	20	1.7	
25	3.4	21	2.5	
26	1.4	22	1.7	
27	1.7	23	1.3	
28	2.0	24	1.9	

P BOARD TRANSISTOR VOLTAGE LIST

Q3	300	Q3	305	Q3:	311	Q3	315	Q3:	319
pin	volt	pin	volt	pin	volt	pin	volt	pin	volt
В	2.4	В	3.0	В	4.1	В	4.2	В	1.9
С	4.2	С	GND	С	7.7	С	2.4	С	3.8
Е	1.8	Е	3.7	Е	3.5	Е	4.8	Е	1.3
Q3	301	Q3	306	Q3:	312	Q3	316	Q3:	320
pin	volt	pin	volt	pin	volt	pin	volt	pin	volt
В	1.6	В	3.1	В	8.8	В	0.0	В	0.0
С	4.2	С	GND	С	0.7	С	1.9	С	5.0
Е	1.0	Е	3.8	Е	9.0	Е	4.9	Е	GND
Q3	302	Q3	308	Q3:	313	Q3	317	Q3:	321
pin	volt	pin	volt	pin	volt	pin	volt	pin	volt
В	1.6	В	4.2	В	0.2	В	2.9	В	4.7
С	4.3	С	2.9	С	2.7	С	5.0	С	0.0
Е	1.0	Е	4.9	Е	GND	Е	2.3	Е	5.0
Q3	304	Q3	309	Q3:	314	Q3	318	Q3:	323
pin	volt	pin	volt	pin	volt	pin	volt	pin	volt
В	2.6	В	0.7	В	0.5	В	2.4	В	1.8
С	GND	С	0.0	С	0.6	С	3.3	С	5.0
Е	3.3	Е	GND	Е	GND	Е	1.8	Е	1.1
								All volta	ges are in V

All voltages are in

P BOARD WAVEFORMS



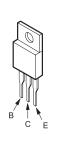
All voltages are in V

6-4. SEMICONDUCTORS

2SA1037AK-7146-QR 2SB709A-QRS-TX 2SD601A-QRS-TX 2SC2412K-T-146-QR



2SA1837 2SC4159-E



ERA38-06TP1 ERA82-004TP5 1SS133T-77 D1N2OR-TA D1NS4-TA MTZJ-T-7712C MTZJ-T-77-33B MTZJ-T-77-39





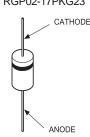
2SB734-7-34

2SC3209LK-TP

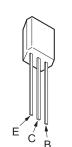
2SA1091O-TPE2 2SA993AS-QRT



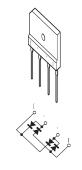
RU-1P ERC06-15S MTZJ-T-77-5.1C MTZJ-T-775.6C MTZJ-T-77-7.5A MTZJ-T-77-10B MTZJ-T-7730D RD10ES-T1B RGP10-GPKG3 RGP02-17PKG23



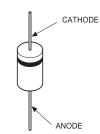




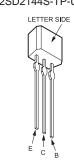
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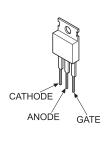
ERB44-06TP1 1SS83TD D1NL2OU-TA EL1Z-V1 ERA22-08TP3 GP08DPKG23 RGP10GPKG23 RU4AM-T3



2SA1309A-QRSTA 2SC3311A-QRSTA 2SD2144S-TP-UVW

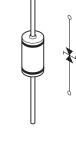


TF541M





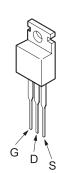
RD9.1EW-T1



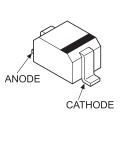
2SC3840K



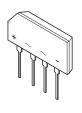
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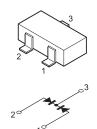
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D2SB60A-F04

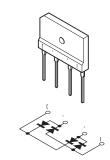


DAP202K-T-146

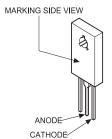


D4SB60L-F

— 61 —



D5LC20U



SECTION 7 EXPLODED VIEW

• Items with no part number and no description are not stocked because they are seldom required for routine service.

Note:

specified.

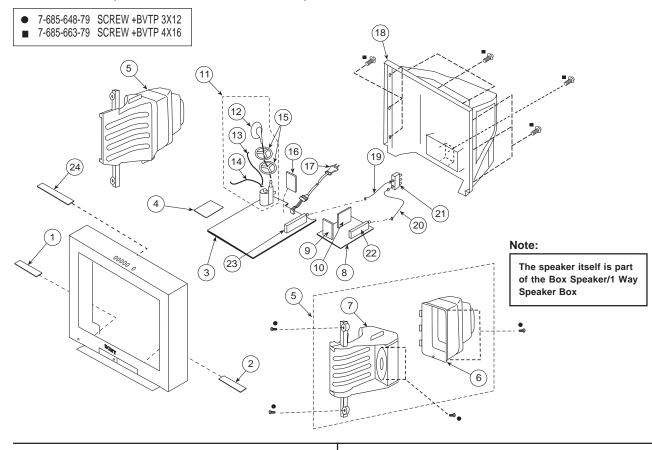
- indicated by the reference numbers in the remarks column.
- The component parts of an assembly are Items marked * are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

Note:

Les composants identifies per un trame et une marque que par une piece portant le numero specifie.

7-1. CHASSIS (KV-27FV16/29FV16/29FV16 ONLY)

The components identified by shading and mark riangleare critical for safety. Replace only with part number



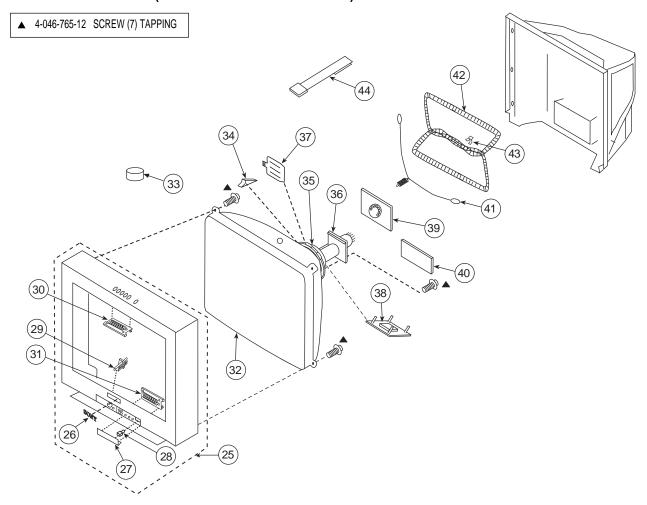
REF.	NO.	PART NO.	<u>DESCRIPTION</u> <u>RE</u>	MARK	REF. NO	. PART NO.	DESCRIPTION	<u>REMARK</u>
1	*	A-1372-825-A	HA MOUNTED PC BOARD		11 🛕	1-453-310-11	FBT ASSY NX-4521//X4J4	12-14
2	*	A-1372-826-A	HB (VAR) MOUNTED PC BOARD		12	1-251-374-13	HV CAP ASSY	
3	*	A-1299-244-A	A COMPLETE PC BOARD		13	1-900-800-82	FOCUS LEAD	
			(KV-29FV16/29FV16C ONLY)		14	1-900-803-22	G2 LEAD	
3	*	A-1299-243-A	À COMPLETE PC BOARD		15	3-704-372-71	HOLDER, HV CABLE	
			(KV-27FV16 ONLY)		16 *	A-1380-633-A	K (VAR) MOUNTED PC BOA	
	Th	ne high-voltage	leads associated with the FBT or	this board	17 △	1-792-874-11	CORD, AC POWER(WITH CO	ONNECTOR)
	ar	e not included a	and must be ordered separately. (See 12-14)			(KV-27FV16 ONLY)	
					17 △	1-790-316-21	CORD, AC POWER(WITH CO	ONNECTOR)
4	*	A-1343-875-A	D (VAR) MOUNTED PC BOARD				(KV-29FV16 ONLY)	
5	*	1-529-336-11	BOX, 1 WAY SPEAKER (10CM)	6-7	17 △	1-769-796-31	CORD, POWER (WITH CON	NECTOR)
			(KV-29FV16/29FV26C ONLY)				(KV-29FV16C ONLY)	
5	*	1-529-358-11	SPEAKER, BOX (5,10CM)	6-7	18	4-076-875-01	COVER, REAR	
			(KV-27FV16 ONLY)		19 *	1-557-056-31	CABLE, P-P	
6	*	4-068-987-01	COVER, SPEAKER					
7		4-068-988-01	BAFFLE, SPEAKER		20 *	1-783-800-11	CABLE, PIN	
					21	8-598-414-20		PF .
8	*	A-1304-202-A	MA (VAR) MOUNTED PC BOARD		22 🛆		TUNER, FSS BTF-FA402	
9	*	A-1190-367-A	P MOUNTED PC BOARD		23 ∧		TUNER, FSS BTF-WA411	
10	*	A-1131-593-A	BC MOUNTED PC BOARD		24 *	A-1372-817-A	HX MOUNTED PC BOARD	

The components identified by shading and mark $\ensuremath{\Delta}$ are critical for safety. Replace only with part number specified.

Note:

Les composants identifies per un trame et une marque \triangle sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

7-2. PICTURE TUBE (KV-27FV16/29FV16/29FV16 ONLY)



REF. NO.	PART NO.	DESCRIPTION	<u>REMARK</u>
25	X-4037-842-1	BEZNET ASSY	26-28
26	3-704-179-31	EMBLEM (NO.9), SON	Y
27	4-068-985-04	DOOR	
28	3-703-574-00	RETAINER, DOOR	
29	4-068-986-11	GUIDE, LED	
20	4 000 000 00	MULTI DUITTON (TOD)	
30	4-068-982-02	MULTI-BUTTON (TOP)	01.0
31	4-068-984-01	MULTI-BUTTON (BOTT)	OM)
32 ∧	8-735-041-05	CRT 29RSN	
		(KV-27FV16/29FV16 O	NLY)
32 ∧	8-735-052-05	CRT 29RSN(FOR EQUA	ATORIAL AREA)
		(KV-29FV16C ONLY)	
33	1-452-032-00	MAGNET, DISC	
34	4-053-005-01	SPACER, DY	
35 ∧	8-451-494-31	DY Y29RSA-S	
36 ⚠	8-453-011-11	NA299-M	

REF.	<u>NO.</u>	<u>Part no.</u>	<u>DESCRIPTION</u>	<u>remark</u>
37		2-163-920-01	PLATE, TLH CORRECTI	ON
38		1-452-896-11	COIL, NA ROTATION (R	T200)
39	*	A-1332-063-A	CA (VAR) MOUNTED PO	BOARD
40	*	A-1342-550-A	VA (VAR) MOUNTED PO	BOARD
41		4-036-329-01	SPRING (B), TENSION	
42	\triangle	1-419-156-11	COIL, DEGUASSING	
			(KV-27FV16 ONLY)	
42	\triangle	1-419-523-21	COIL, DEGAUSSING	
			(KV-29FV16/29FV16C C	DNLY)
43	*	4-062-970-01	CLIP (29RSN), DGC	
44		4-062-047-01	PIECE A(110), CONV CO	ORRECT

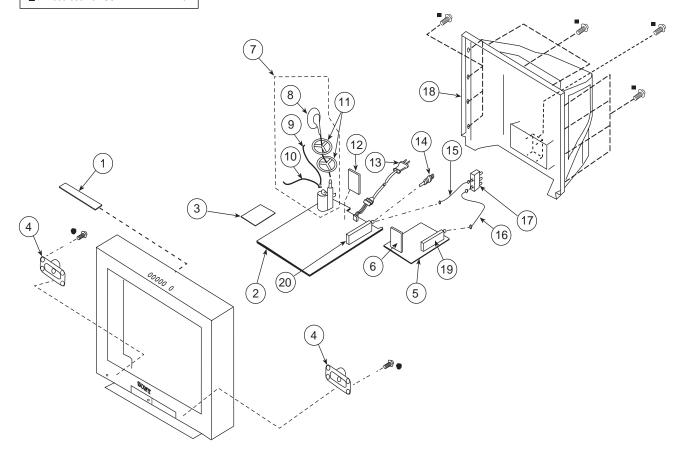
The components identified by shading and mark $\ensuremath{\Delta}$ are critical for safety. Replace only with part number specified.

Note:

Les composants identifies per un trame et une marque \triangle sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

7-3. CHASSIS (KV-32FS12/32FS16 ONLY)

- 7-685-648-79 SCREW +BVTP 3X12
- 7-685-663-79 SCREW +BVTP 4X16

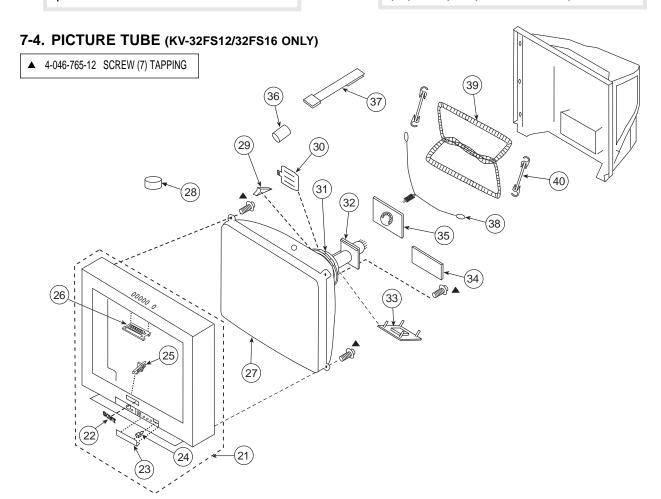


REF.	. <u>NO.</u>	PART NO.	DESCRIPTION	<u>REMARK</u>	
1 2	*		HX MOUNTED PC BO A COMPLETE PC BO	*· ·· ·=	
		0		the FBT on this board eparately. (See 8-10)	
3	*	A-1343-874-A	D (VAR) MOUNTED I	PC BOARD	
4		1-529-498-11	SPEAKER (13.1X6.2	2CM)	
5	*	A-1304-203-A	MA (VAR) MOUNTED	PC BOARD	
			(KV-32FS12 ONLY)		
5	*	A-1304-196-A	MA (VAR) MOUNTED (KV-32FS16 ONLY)	O PC BOARD	
6	*	A-1190-367-A	P MOUNTED PC BO (KV-32FS16 ONLY)	ARD	
7	\triangle	1-453-338-11	FBT ASSY NX-4600/	//X4J4 8-10	
8		1-251-374-13	HV CAP ASSY		
9		1-900-800-82	FOCUS LEAD		
10		1-900-803-50	G2 LEAD		

REF	. NO.	PART NO.	<u>DESCRIPTION</u>	<u>REMARK</u>
11		3-704-372-71	HOLDER, HV CABLE	
12	*	A-1380-632-A	K (VAR) MOUNTED PC B	OARD
13	\triangle	1-792-874-11	CORD, AC POWER(WITH	CONNECTOR)
14		1-766-374-11	PLUG, F-PIN	
			(KV-32FS12 ONLY)	
15	*	1-557-056-31	CABLE, P-P	
			(KV-32FS16 ONLY)	
16	*	1-783-800-11	CABLE, PIN	
			(KV-32FS16 ONLY)	
17		8-598-414-20	CHANGER, ANTENNA AS	S-2F
			(KV-32FS16 ONLY)	
18		4-075-654-11	COVER, REAR	
19	\triangle	8-598-501-00	TUNER, FSS BTF-FA402	
			(KV-32FS16 ONLY)	
20	\triangle	8-598-431-30	TUNER, FSS BTF-WA411	

The components identified by shading and mark \triangle are critical for safety. Replace only with part number specified.

Note:



REF.NO.	PART NO.	DESCRIPTION	<u>REMARK</u>
21	X-4037-664-1	BEZNET ASSY	22-25
22	3-704-179-31	EMBLEM (NO.9), SON	Υ
23	4-075-658-01	DOOR .	
24	4-047-464-01	CATCHER, PUSH	
25	4-075-657-01	GUIDE, LED	
26	4-068-982-02	MULTI-BUTTON (TOP)	
27 🗥	8-735-066-05	CRT 34RSN(SDP)	
28	1-452-032-00	MAGNET, DISC	
29	4-053-005-01	SPACER, DY	
30	2-163-920-01	PLATE, TLH CORRECT	TION
04 .	0 454 400 04	D\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	
31 🛆	8-451-499-21	DY Y34RSA-X	
32 ∧	8-453-007-41	NA324-M4	T000)
33		COIL, NA ROTATION (I	•
34 *	A-1342-549-A	(,	
35 *	A-1332-061-A	CA (VAR) MOUNTED P	C BOARD
36	1-500-586-11	FILTER, CLAMP (FERF	RITE CORE)
37	4-062-047-01	PIECE A(110), CONV (
38	4-036-329-01	SPRING (B), TENSION	
39 ∧	1-416-827-21	COIL, DEGAUSSING	
40	4-065-895-03	HOLDER, DGC	

SECTION 8 ELECTRICAL PARTS LIST



Note:

The components identified by shading and mark \triangle are critical for safety. Replace only with part number specified.

Note:

Les composants identifies per un trame et une marque \triangle sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

The components identified by M in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.

- Items marked * are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

RESISTORS

- All resistors are in ohms
- F : nonflammable

When indicating parts by reference number, please include the board name

REF. NO.	PART NO.	DESCRIPTION	RE	MARK		REF. NO).	PART NO.	DESCRIPTION	RE	MARK	
						C215		1-164-346-11	CERAMIC CHIP	1μF		16V
$\overline{\Lambda}$	\neg					C216		1-126-963-11	ELECT	4.7µF	20%	50V
\perp \boldsymbol{A}						C219		1-126-964-11	ELECT	10µF	20%	50V
	<u> </u>					C401		1-126-968-11	ELECT	100µF	20%	50V
									(KV-27FV16/29FV16/	•		•••
*	A-1299-243-A	A COMPLETE PC B	OARD			C402		1-126-972-11	ELECT	1000µF	20%	50V
		(KV-27FV16 ONLY)							(KV-27FV16/29FV16/			
*	A-1299-244-A	A COMPLETE PC B							,		,	
	A 4000 040 A	(KV-29FV16/29FV16C	•			C402		1-126-943-11	ELECT	2200µF	20%	25V
•	A-1299-218-A	A COMPLETE PC B							(KV-32FS12/32FS16	•		
		(KV-32FS12/32FS16 (JNLY)			C403		1-126-957-11	ÈLECT	0.22µF	20%	50V
-	ا معملامی طعامات	ملائين لمعادمة معادمة	the CDT on th	h:a haa.		C420		1-164-222-11	CERAMIC CHIP	0.22µF		25V
		eads associated with				C421		1-164-222-11	CERAMIC CHIP	0.22µF		25V
		be ordered separate	ly. Order the	IOIIOWII	ig leads	C435		1-164-222-11	CERAMIC CHIP	0.22µF		25V
W	hen requesting t	nis a Board:							(KV-27FV16/29FV16/		NLY)	
	1-251-374-13	HV CAP ASSY				<u> </u>			0554446 0: ::5			10)/
	1-900-803-22	G2 LEAD				C441		1-164-346-11	CERAMIC CHIP	1μF	200/	16V
		(All EXCEPT KV-32	FS12/32FS16	3)		C442		1-126-963-11	ELECT	4.7µF	20%	50V
	1-900-803-50	G2 LEAD				C501		1-102-114-00	CERAMIC	470PF	10%	50V
		(KV-32FS12/32FS16	ONLY)			C502		1-106-383-00	MYLAR	0.047µF	10%	200V
	1-900-800-82	FOCUS LEAD	·			C503		1-102-228-00	CERAMIC	470PF	10%	500V
	1-533-223-11	HOLDER, FUSE				C504		1-102-228-00	CERAMIC	470PF	10%	500V
*	4-374-846-01	COVER, CAPACITO	IR CAPTVPE	:		C505	⚠	1-162-116-00	CERAMIC	680PF	10%	2KV
	4-382-854-11	SCREW (M3X10), P		•		C506		1-162-318-11	CERAMIC	0.001µF	10%	500V
	4-302-034-11	SCINE W (WISK 10), I	, 500 (+)			C507	\triangle	1-117-717-11	FILM	17000PF	3%	1.2KV
									(KV-27FV16/29FV16/	/29FV16C O	NLY)	
	CADACITOD					C507	\triangle	1-117-652-11	FILM	22000PF	3%	1.2KV
	CAPACITOR								(KV-32FS12/32FS16	ONLY)		
C100	1-216-295-91	SHORT				C508	Α	1-137-150-11	MYLAR	0.01µF	10%	100V
C101	1-216-295-91	SHORT								680PF	10%	2KV
C102	1-126-933-11	ELECT	100µF	20%	16V	C509 C510	Z13	1-162-116-00 1-107-649-11	CERAMIC ELECT	2.2µF	20%	250V
C104	1-126-941-11	ELECT	470µF	20%	25V	C510	Α.	1-107-649-11	FILM	2.2μr 1μF	5%	250V 250V
C105	1-104-664-11	ELECT	47µF	20%	25V	6311	213	1-110-022-11	(KV-27FV16/29FV16			2501
						C511	A	1-115-521-11	FILM	0.82µF	5%	250V
C204	1-163-017-00	CERAMIC CHIP	0.0047µF	10%	50V	6311	213	1-110-021-11	(KV-32FS12/32FS16		J/0	2501
C205	1-126-963-11	ELECT	4.7μF	20%	50V				(NV-321 312/321 310	ONLI		
C210	1-126-963-11	ELECT	4.7µF	20%	50V	C512	\wedge	1-106-387-00	MYLAR	0.068µF	10%	200V
C211	1-126-935-11	ELECT	470µF	20%	16V	C512	4	1-100-307-00	MYLAR	0.000µr	10%	100V
0040	4 400 000 44	(KV-27FV16/29FV16		,	501/	C513		1-109-844-11	FILM	0.68µF	5%	250V
C212	1-126-963-11		4.7µF	20%	50V	0014		1 100 UT-11	(KV-27FV16/29FV16			2001
		(KV-27FV16/29FV16	5/29FV16C ON	NLY)		C514		1-115-521-11	FILM	0.82µF	5%	250V
0040	4 400 000 44	FLECT	47.5	0007	F0\/	3017		. 110 021 11	(KV-32FS12/32FS16	•	U /U	2001
C213	1-126-963-11		4.7µF	20%	50V	C515	Λ	1-162-116-00		680PF	10%	2KV
C24.4	1 164 040 44	(KV-27FV16/29FV16		NLY)	16\/	3010	۰	. 102 110 00	J_10 11111	3001 1	10/0	
C214	1-104-340-11	CERAMIC CHIP	1µF		16V	I						

Note:

The components identified by shading and mark \triangle are critical for safety. Replace only with part number specified.



REF.NO.	PART NO.	DESCRIPTION	RE	MARK		REF.NO		PART NO.	DESCRIPTION	REI	MARK	
C517	1-107-846-11	FILM (KV-32FS12/32FS16	0.1µF (ONLY)	5%	250V	C607	Δ	1-136-311-11	MYLAR (KV-29FV16/29FV16	0.47µF C ONLY)	20%	300V
C520 △	1-129-722-00	FILM (KV-27FV16/29FV16	0.047µF	5% NLY)	630V	C607	Δ	1-136-311-11	MYLAR (ALL EXCEPT 29FV	0.47µF	20%	125V
C520 △	1-130-118-91	FILM	0.051µF	5%	400V	C609		1-126-968-11	ELECT	100µF	20%	50V
00 2 0		(KV-32FS12/32FS16		0,0	1001	C610		1-126-964-11	ELECT	10µF	20%	50V
C521	1-164-646-11	CERAMIC	2200PF	10%	500V	C611	Λ	1-127-795-51	CERAMIC	3300PF	20%	250V
C523	1-126-941-11	ELECT	470µF	20%	25V	0011	213	1-121-130-01	CLIVAIVIIC	330011	2070	
C524	1-102-244-00	CERAMIC	220PF	10%	500V	C612	Δ	1-113-611-11	ELECT(BLOCK) (ALL EXCEPT KV-29)	820µF	20%	250V
		CERAMIC	100PF			0012		1 100 004 11	•		,	50V
C525	1-107-612-11	-		5%	500V	C613		1-126-964-11	ELECT	10µF	20%	
C526	1-126-960-11	ELECT	1µF	20%	50V	C614		1-130-495-00	MYLAR	0.1µF	5%	50V
C527	1-126-965-11	ELECT	22µF	20%	50V	C615		1-130-202-00	FILM	0.022µF	10%	400V
C528	1-164-161-11	CERAMIC CHIP	0.0022µF	10%	50V				(KV-29FV16/29FV16	C ONLY)		
C529	1-164-161-11	CERAMIC CHIP	0.0022µF	10%	50V	C616		1-107-824-11	CERAMIC	220PF	5%	1KV
C530	1-164-161-11	CERAMIC CHIP	0.0022µF	10%	50V				(KV-29FV16/29FV16	C ONLY)		
		(KV-27FV16/29FV16	/29FV16C O	NLY)		C617		1-125-893-11	FILM	680PF	3%	1.5KV
C530	1-163-009-11	CERAMIC CHIP	0.001µF	10%	50V	C618		1-164-081-11	CERAMIC	470PF	10%	50V
		(KV-32FS12/32FS16	ONLY)			C619		1-136-356-11	MYLAR	470PF	5%	50V
C531	1-106-387-00	MYLAR	0.068µF	10%	200V	C620		1-104-665-11	ELECT	100µF	20%	25V
C533	1-126-941-11	ELECT	470μF	20%	25V					·		
			_			C621		1-125-772-91	CERAMIC	1500PF	10%	2KV
	1-126-964-11	ELECT	10μF	20%	50V	C622		1-164-625-11	CERAMIC	680PF	10%	500V
C535	1-126-959-11	ELECT	0.47µF	20%	50V	C623		1-164-625-11	CERAMIC	680PF	10%	500V
C536	1-102-228-00	CERAMIC	470PF	10%	500V	C624		1-131-867-51	ELECT	100µF		160V
C537 △	1-126-965-11	ELECT	22µF	20%	50V	C625		1-135-572-51	ELECT	1000µF	20%	50V
C539	1-107-662-11	ELECT	22µF	20%	250V				(KV-27FV16/29FV16	/29FV16C ON	NLY)	
C540	1-107-645-11	ELECT	22µF	20%	160V	C625		1-135-412-51	ELECT	1000µF	20%	25V
C541	1-126-969-11	ELECT	220µF	20%	50V				(KV-32FS12/32FS16	ONLY)		
C542	1-126-967-11	ELECT	47μF	20%	50V	C626		1-135-573-51	ÈLECT	15000µF	20%	25V
C543	1-136-169-00	MYLAR	0.22µF	5%	50V	C627		1-136-189-00	MYLAR	0.1µF	10%	250V
	1-126-965-11	ELECT	22µF	20%	50V	C628		1-104-665-11	ELECT	100µF	20%	25V
0010 =			p	2070		C630		1-113-924-11	CERAMIC	0.0047µF	20%	250V
C547 △	1-163-031-11	CERAMIC CHIP	0.01µF		50V			1 110 021 11	(ALL EXCEPT KV-29			2001
C548	1-104-710-11	ELECT	22µF		160V							
C548	1-107-995-11	(KV-27FV16/29FV16 ELECT	i/29FV16C O 100μF	NLY)	160V	C631		1-113-924-11	CERAMIC (ALL EXCEPT KV-29	0.0047µF 9FV16/29FV1	20% 6C)	250V
0010	1 101 000 11	(KV-32FS12/32FS16	•		1001	C634		1-137-605-11	MYLAR	0.01µF	10%	250V
C549	1-126-934-11	ELECT	220µF	20%	16V	C635		1-163-009-11	CERAMIC CHIP	0.001µF	10%	50V
		FILM		20 % 5%	250V	1		1-126-970-11		330μF		
C550	1-107-846-11	(KV-27FV16/29FV16	0.1µF 5/29FV16C O		2007	C636 C637		1-120-970-11	CERAMIC CHIP	о.001µF	20% 10%	50V 50V
<u>C550</u>	1-117-667-11	FILM	0.47µF	5%	250V	C638		1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C550	1-111-001-11			J/0	200V	1						
0==4 .		(KV-32FS12/32FS16		4007	0001/	C639		1-126-965-11	ELECT	22µF	20%	50V
	1-137-417-11	MYLAR	0.0047µF	10%	200V	C641		1-107-679-91	ELECT	10µF	20%	450V
C553	1-107-662-11	ELECT	22µF	20%	250V	C643		1-104-760-11	CERAMIC CHIP	0.047µF	10%	50V
C554	1-102-110-00	CERAMIC	220PF	10%	50V	C644		1-161-964-91	CERAMIC	0.0047µF		250V
C555 △	1-117-629-11	FILM	2700PF	3%	1.2KV							
		(KV-27FV16/29FV16	/29FV16C O	NLY)		C645		1-161-964-91	CERAMIC	0.0047µF		250V
						C646		1-161-964-91	CERAMIC	0.0047µF		250V
C555	1-117-635-11	FILM	4700PF	3%	1.2KV	C647		1-161-964-91	CERAMIC	0.0047µF		250V
		(KV-32FS12/32FS16		-		C648		1-136-346-21	MYLAR	0.22µF	20%	300V
C601	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V	55.5		!	(KV-29FV16/29FV16		/•	
C602	1-126-967-11	ELECT	47μF	20%	50V	C648		1-136-346-21	MYLAR	0.22µF	20%	125V
C604	1-164-182-11	CERAMIC CHIP	0.0033µF	10%	50V	5070		1 100 070-21	(ALL EXCEPT 29FV	•		1201
	1-104-102-11	CERAMIC	3300PF	20%	250V				(/ ILL L/OLI I 231 V	10/201 1 100)		
0000 A	1-121-130-01	OLIVAIVIIO	JJUUF F	40 /0	200 V	1						



The components identified by shading and mark \triangle are critical for safety. Replace only with part number specified.

Note:

REF.NO.	PART NO.	DESCRIPTION	REMAR	RK	REF.NO.	PART NO.	DESCRIPTION F	REMARK
C649	1-161-830-00	CERAMIC	0.0047µF 20%	500V	D203	8-719-108-12	DIODE RD9.1EW-T1	
-		(KV-27FV16/29FV16					(KV-27FV16/29FV16/29FV16C (ONLY)
652	1-130-471-00	MYLAR	0.001µF 5%	50V	D204	8-719-982-22	DIODE MTZJ-T-77-30D	,
654	1-107-636-11	ELECT	10µF 20%		D205		DIODE RD9.1EW-T1	
	1-136-311-11	MYLAR	0.47µF 20%		D206		DIODE RD9.1EW-T1	
			•		D208		DIODE MTZJ-T-77-10B	
657	1-104-664-11	ELECT	47μF 20%	5 25V	D200	0-113-110-11	DIODE WITZU-1-11-10D	
658	1-135-572-51	ELECT	1000μF 20%	5 50V	D209	8-719-977-22	DIODE UDZ-TE-17-9.1B	
		(KV-27FV16/29FV16			D210	8-719-110-17	DIODE MTZJ-T-77-10B	
658	1-135-412-51	ELECT	1000µF 20%	25V	D211	8-719-108-12	DIODE RD9.1EW-T1	
		(KV-32FS12/32FS16			D212	8-719-110-17	DIODE MTZJ-T-77-10B	
659	1-135-573-51	ELECT	15000µF 20%	5 25V			(KV-32FS12/32FS16 ONLY)	
	1-128-714-11		330µF 20%		D213	8-719-110-17	DIODE MTZJ-T-77-10B	
000 🗥	1-120-7 14-11			400 V	1 5210	071011011	(KV-32FS12/32FS16 ONLY)	
	4 400 744 44	(KV-29FV16/29FV16		400) ((KV-321 312/321 310 ONL1)	
2661 △	1-128-714-11		330µF 20%	5 400V	D044	0.740.400.40	DIODE DD0 4EW T4	
		(KV-29FV16/29FV16	,		D214		DIODE RD9.1EW-T1	
699	1-117-703-11	CERAMIC	0.0047µF 20%	250V	D215		DIODE RD9.1EW-T1	F0/ 4/40144
		(ALL EXCEPT KV-2	9FV16/29FV16C)		D216	1-216-025-91		5% 1/10W
2001	1-104-664-11	ELECT	47µF 20%	5 25V			(KV-27FV16/29FV16/29FV16C (ONLY)
					D230	8-719-108-12	DIODE RD9.1EW-T1	
					D231	8-719-108-12	DIODE RD9.1EW-T1	
	CONNECTOR				Door	0.740.400.40	DIODE DDO 4EW T4	
* 1001	4 504 507 44	DILLO CONNECTO) 4D		D232		DIODE RD9.1EW-T1	
N301 *	1-564-507-11	PLUG, CONNECTOR			D233		DIODE RD9.1EW-T1	
N406 *	1-564-507-11	PLUG, CONNECTOR			D234	8-719-977-22	DIODE UDZ-TE-17-9.1B	
N460	1-573-298-21	CONNECTOR, BOAI		•			(KV-27FV16/29FV16/29FV16C (ONLY)
CN501 *	1-580-798-11	CONNECTOR PIN (I			D235	8-719-977-22		
CN502 *	1-564-509-11	PLUG, CONNECTOR	R 6P				(KV-27FV16/29FV16/29FV16C (ONLY)
					D236	8-719-977-22	DIODE UDZ-TE-17-9.1B	
CN503 *	1-564-512-11	PLUG, CONNECTOR	R 9P				(KV-27FV16/29FV16/29FV16C (ONLY)
		(KV-27FV16/29FV16	3/29FV16C ONLY)					
CN504 *	1-508-784-21	PIN, CONNECTOR (5MM PITCH) 1P		D401	8-719-110-17	DIODE MTZJ-T-77-10B	
CN506 *	1-564-508-11	PLUG, CONNECTOR	R 5P		D501	8-719-945-80	DIODE ERC06-15S	
CN515 *	1-564-510-11	PLUG, CONNECTOR	R 7P		D502	8-719-908-03	DIODE GP08DPKG23	
CN602 *	1-580-843-11	PIN, CONNECTOR (I			D503		DIODE GP08DPKG23	
		, (,		D504	8-719-945-80		
CN603 *	1-573-963-11	PIN, CONNECTOR (PC BOARD) 3P					
CN604 *	1-573-963-11	PIN, CONNECTOR (D505	8-719-312-10	DIODE RU4AM-T3	
		(KV-32FS12/32FS16			D506	8-719-302-43		
N2001*	1-764-334-11	1	,		D507	8-719-991-33	DIODE 1SS133T-77	
. 12001	. 101 00 T 11	(KV-27FV16/29FV16			D507	8-719-991-33	DIODE 188133T-77	
CN2001*	1-564-511-11	PLUG, CONNECTOR			D508	8-719-109-89		
JINZUU I	1-004-011-11				DOOR	0-1 19-109-69	DIODE INITA-1-11-0.00	
NI0000+	4 504 500 44	(KV-32FS12/32FS16	,		D540	0.740.000.00	DIODE ODGGDDI/OGG	
CN2003*	1-564-506-11	PLUG, CONNECTOR	K 3P		D510	8-719-908-03	DIODE GP08DPKG23	
	4 =0 4 =4 = 1	DI II O O O O O O O O O O O O O O O O O			D511	8-719-302-43		
CN2004*	1-564-508-11	PLUG, CONNECTOR			D512	8-719-073-01		
		(KV-27FV16/29FV16			D513		DIODE RGP15GPKG23	
CN2005*	1-764-333-11	PLUG, CONNECTOR			D514	8-719-979-85	DIODE RGP15GPKG23	
N2006*	1-764-333-11	PLUG, CONNECTOR						
N2007*	1-564-512-11	PLUG, CONNECTOR	R 9P		D515	8-719-073-01	DIODE MA111-TX	
N2008*	1-564-512-11	PLUG, CONNECTOR	R 9P		D516 △	8-719-991-33	DIODE 1SS133T-77	
						8-719-991-33		
							DIODE MTZJ-T-77-7.5X	
	DIODE					8-719-302-43	DIODE EL1Z-V1	
2004		DIODE DOS (EV. E.						
)201	8-/19-108-12	DIODE RD9.1EW-T1				8-719-073-01	DIODE MA111-TX	
2000	0.740.400.40	(KV-27FV16/29FV16	,		D521	8-719-991-33	DIODE 1SS133T-77	
0202	o-719-108-12	DIODE RD9.1EW-T1 (KV-27FV16/29FV16			D522	8-719-991-33	DIODE 1SS133T-77	
		/L\/16/20E\/16	COULVIEC ONLV\		1			

Note:

The components identified by shading and mark \triangle are critical for safety. Replace only with part number specified.



Fig. 10	REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
PROM	D601	8-719-991-33	DIODE 1SS133T-77		FB603	1-412-911-11	FERRITE	
803 8-719-82-26 BIOLOGE MIZL-T-77-388 F8055 4-719-82-72 DIODE REPOLET PROG23 F805 4-719-82-72 DIODE REPOLET PROG23 F805 4-719-82-72 DIODE REPOLET PROG24 F805 4-719-82-72 DIODE REPOLET PROG24 F805 4-719-82-72 DIODE REPOLET PROG25 F805 4-719-82-72 DIODE DINS. PATE PROG25 F805 4-719-82	D602	8-719-991-33	DIODE 1SS133T-77			1-412-911-11	FERRITE	
Page	D603	8-719-982-26	DIODE MTZJ-T-77-33B		FB605	1-412-911-11	FERRITE	
\$68	D604							
BB	D605 △	8-719-510-53	DIODE D4SB60L-F		FB609	1-412-911-11	FERRITE	
271-9891-33 DIODE 1851331-77					FB610	1-412-911-11	FERRITE	
1.000 1.0	D606 △	8-719-108-18	DIODE TF541M					
1979-31-31 DIODE RU-1-P	D607	8-719-991-33	DIODE 1SS133T-77					
809 8-719-311-31 DIODE RU-1-9	D608					<u>IC</u>		
610 8-719-510-02 DIODE DINSA-TA	D609	8-719-311-31			10.404		10.70470574.0/410	
CAUCA S-759-75-40 ICTDA8SBOOM (ICTDA8SBOOM (ICTDA			,)	IC401	8-759-490-17		NONIL VA
611 8-719-08-70 DIODE DINL20U-TA DIODE MTZU-T-77-10B DIODE DIODE MTZU-T-77-10B DIODE MTZU-T-77-10B DIODE DIODE MTZU-T-77-10B DIODE DIODE MTZU-T-77-10B DIODE DIOD	D610	8-719-510-02	DIODE D1NS4-TA		10.400	0.750.570.40	,	ONLY)
8-719-110-17 DODE MTZJ-T-77-10B	Do.		DIODE DANIE COLLETA		10402	8-759-573-40		S/20EV/46C ONLV
1.500 1.5	D611				ICEO1 A	0 750 700 07		729F V 10G OINLY)
0.00	D612							
1.500 8-719-312-10 DIODE RUAAM-T3 DIODE DECOU					10302	0-739-900-30		S/20EV/46C ONLV
Second					IC502	9 750 102 71	,	129FV 10G ONLT)
616 8-719-510-37 DIODE DSLC20U 107 8-719-110-31 DIODE MTZJ-T-77-12C 108 8-719-910-33 DIODE SIST33T-77 108 8-719-110-17 DIODE DSLC20U 108 8-719-910-37 DIODE DSSB00A-F04 109 8-719-910-39 DIODE MTZJ-T-77-10B 109 8-719-913-30 DIODE SIST33T-77 100 B ST-19-913-30 DIODE SIST33T-77 100 B ST-19-913-30 DIODE SIST33T-77 100 B ST-19-910-30 DIODE DSSB03A-F04 100 B 8-719-910-30 DIODE DSSB03A-F04 100 B 8-719-910-40 DIODE MTZJ-T-77-5A 100 B 8-719-910-40 DIODE MTZJ-T-77-10B 100 B 8-719-910-40 DIODE MTZJ-T-77-10B 100 B 8-719-91-40 DIODE MTZJ-T-77-5.1C 100 B 8-719-91-40 DIODE MTZJ-T-77-5.	D615	8-719-312-10	DIODE RU4AM-13		10302	0-733-132-71		S ONL V)
617 8-719-110-31 DIODE MTZL-T-77-12C C601	D616	Q_710 E10 27	DIODE DEI COOLI				(11.4-021 012/021 010	ONLI
8-719-991-33 DIODE ISS133T-77 619 8-719-110-17 DIODE MTZJ-T-77-10B 620 8-719-510-37 DIODE MTZJ-T-77-10B 621 8-719-419-45 DIODE D2SB60A-F04 622 8-719-97-76 DIODE D2SB60A-F04 623 8-719-981-33 DIODE ISS133T-77 625 8-719-981-33 DIODE ISS133T-77 626 8-719-991-33 DIODE ISS133T-77 627 8-719-100-70 DIODE D2SB60A-F04 628 8-719-991-33 DIODE ISS133T-77 629 8-719-910-3 DIODE ISS133T-77 629 8-719-100-8 DIODE D2SB60A-F04 620 8-719-100-8 DIODE D2SB60A-F04 621 8-719-100-8 DIODE D2SB60A-F04 622 8-719-100-8 DIODE D2SB60A-F04 623 8-719-910-3 DIODE ISS133T-77 625 8-719-910-3 DIODE MTZJ-T-77-5A 626 8-719-910-8 DIODE D2SB60A-F04 627 8-719-100-8 DIODE D2SB60A-F04 628 8-719-100-8 DIODE D2SB60A-F04 629 8-719-110-17 DIODE MTZJ-T-77-5A 629 8-719-110-17 DIODE MTZJ-T-77-10B 620 8-719-110-17 DIODE MTZJ-T-77-10B 621 8-719-110-17 DIODE MTZJ-T-77-10B 622 8-719-110-17 DIODE MTZJ-T-77-10B 623 8-719-110-17 DIODE MTZJ-T-77-10B 624 8-719-110-17 DIODE MTZJ-T-77-10B 625 8-719-110-17 DIODE MTZJ-T-77-10B 626 8-719-110-17 DIODE MTZJ-T-77-10B 627 8-719-110-17 DIODE MTZJ-T-77-10B 628 8-719-110-17 DIODE MTZJ-T-77-10B 629 8-719-110-17 DIODE MTZJ-T-77-10B 620 8-719-110-17 DIODE MTZJ-T-77-10B 620 8-719-110-17 DIODE MTZJ-T-77-10B 620 8-719-110-17 DIODE MTZJ-T-77-10B 620 8-719-110-17 DIODE MTZJ-T-77-5.1C 620 8-719-110-17 DIODE MTZJ-T-77-5.1C 621 1-794-116-11 JACK BLOCK, PIN 3P 622 1-794-116-11 JACK BLOCK, PIN 3P 623 1-794-116-11 JACK BLOCK, PIN 3P 624 1-794-116-11 JACK BLOCK, PIN 3P 625 1-794-116-11 JACK BLOCK, PIN 3P 626 1-794-116-11 JACK BLOCK, PIN 3P 627 1-794-116-11 JACK BLOCK, PIN 3P 627 1-794-116-11 JACK BLOCK, PIN 3P 628 1-79-110-17 DIODE MTZJ-T-77-5.1C 629 1-794-116-11 JACK BLOCK, PIN 3P 629 1-794-116-11 JACK BLOCK, PIN 3P 620 1-794-1					IC601 A	8-749-014-48	IC STR-F6656	
1000 8.719-110-17 10100E MTZJ-T-77-10B 1000E MTZJ-T-77-10B 1000E DSLC20U 1000E SST33T-77 1000E					10001 🕹	0 740 014 40		SC ONLY)
8-719-510-37 DIODE DSLC20U 8-719-077-76 DIODE DSLS860A-F04 623 8-719-948-45 DIODE ERA22-08TP3 624 8-719-991-33 DIODE ISS1337-77 625 8-719-991-33 DIODE ISS1337-77 626 8-719-931-33 DIODE DSLS91337-77 627 8-719-110-43 DIODE DSLS20-TA 628 8-719-110-47 DIODE MTZ-J-T-77-5A 629 8-719-110-47 DIODE MTZ-J-T-77-5B 620 8-719-110-17 DIODE MTZ-J-T-77-10B 6200 8-719-108-12 DIODE RD9.16W-11 6200 8-719-921-44 DIODE MTZ-J-T-77-5.1C 6201 8-719-921-44 DIODE MTZ-J-T-77-5.1C 6202 8-719-110-17 DIODE MTZ-J-T-77-5.1C 6203 8-719-108-12 DIODE MTZ-J-T-77-5.1C 6204 8-719-921-44 DIODE MTZ-J-T-77-5.1C 6205 8-719-921-44 DIODE MTZ-J-T-77-5.1C 6206 8-719-921-45 DIODE MTZ-J-T-77-5.1C 6207 8-719-921-45 DIODE MTZ-J-T-77-5.1C 6208 8-719-921-45 DIODE MTZ-J-T-77-5.1C 6209 8-719-921-45 DIODE MTZ-J-T-77-5.1C 6209 8-719-921-46 DIODE MTZ-J-T-77-5.1C 6209 8-719-921-47 DIODE MTZ-J-T-77-5.1C 6209 8-719-921-49 DIODE MTZ-J-T-77-5.1C 6209 8-719-921-49 DIODE MTZ-J-T-77-5.1C 6209 8-719-921-49 DIODE MTZ-J-T-77-5.1C 6209 8-719-921-49 DIODE MTZ-J-T-77-5.1C 6209 8-719-921-40 DIODE MTZ-J-T-77-5.1C 6209 8-719-108-12 DIODE MT					IC601 A	8-749-015-61		JO ONET
Column					10001 🕹	0 743 010 01		9FV16/29FV16C)
622 8-719-977-76 DIODE D2SB60A-F04 623 8-719-981-33 DIODE ERA22-08TP3 IC604 8-759-701-75 IC NJM7805FA 624 8-719-991-33 DIODE 1SS133T-77 625 8-719-991-33 DIODE SS133T-77 626 8-719-963-70 DIODE DINL20U-TA 627 8-719-910-30 DIODE DINL20U-TA 628 8-719-910-30 DIODE DINL20U-TA 629 8-719-10-03 DIODE DINL20U-TA 620 8-719-10-10 DIODE DINL20U-TA 620 8-719-10-10 DIODE DINL20U-TA 621 8-719-10-10 DIODE MTZJ-T-77-5A 622 8-719-10-10 DIODE MTZJ-T-77-5A 623 8-719-10-10 DIODE DINL20U-TA 624 8-719-10-10 DIODE MTZJ-T-77-5A 625 8-719-10-10 DIODE MTZJ-T-77-5A 626 8-719-10-10 DIODE MTZJ-T-77-5A 627 8-719-10-10 DIODE MTZJ-T-77-5A 628 8-719-10-10 DIODE MTZJ-T-77-10B 629 8-719-10-11 DIODE MTZJ-T-77-10B 6200 8-719-108-12 DIODE RD9.1EW-T1 (KV-32FS1232FS16 ONLY) 6200 8-719-921-44 DIODE MTZJ-T-77-5.1C 620 8-719-10-11 DIODE MTZJ-T-77-5.1C 620 8	D020	0-7 19-010-07	DIODE DOLGZOO		IC602 A	8-749-016-47		01 110/201 1100)
E23 8.719-948-45 DIODE ERA22-08TP3 DIODE ERA22-08TP3 DIODE ISS133T-77 DIODE ISS133T-77 DIODE ISS133T-77 DIODE ISS133T-77 DIODE ISS133T-77 DIODE ISS133T-77 DIODE DINL20U-TA DIODE DIODE DINL20U-	D622	8-719-077-76	DIODE D2SR60A-F04					
624 8-719-991-33 DIODE 1SS133T-77 625 8-719-991-33 DIODE 1SS133T-77 626 8-719-991-37 DIODE 1SS133T-77 627 8-719-110-03 DIODE DINL20U-TA 628 8-719-10-03 DIODE DINL20U-TA 629 8-719-110-03 DIODE DINL20U-TA 629 8-719-10-10 DIODE DINL20U-TA 6200 8-719-10-10 DIODE DINL20U-TA 6200 8-719-10-17 DIODE MTZ.J-T-77-10B 6200 8-719-108-12 DIODE RD3-15EW-T1 6200 8-719-108-12 DIODE RD3-15EW-T1 6200 8-719-108-12 DIODE RD3-15EW-T1 6200 8-719-921-44 DIODE MTZ.J-T-77-5.1C 6200 8-719-921-44 DIODE MTZ.J-T-75-1C 6200 8-719-921-45 DIODE MTZ.J-T-77-5.1C 6200 8-719-110-11 JACK BLOCK, PIN 3P 6201 1-794-116-11 JACK BLOCK, PIN 3P 6201 1-794-116-								
625 8-719-991-33 DIODE 1SS133T-77 626 8-719-963-70 DIODE DINL20U-TA 627 8-719-110-03 DIODE MTZJ-T-77-7.5A 628 8-719-510-48 DIODE DINL20U-TA 628 8-719-510-48 DIODE DINL20U-TA 629 8-719-90-80 DIODE MTZJ-T-77-7.5A 620 8-719-90-80 DIODE MTZJ-T-77-10B 62002 8-719-110-17 DIODE MTZJ-T-77-10B 62003 8-719-108-12 DIODE MTZJ-T-77-10B 62004 8-719-921-44 DIODE RD9.1EW-11 (KV-32FS12/32FS16 ONLY) 62005 8-719-921-44 DIODE MTZJ-T-77-5.1C 6207 8-719-921-44 DIODE MTZJ-T-77-5.1C 6208 8-719-921-44 DIODE MTZJ-T-77-5.1C 6209 8-719-921-44 DIODE MTZJ-T-77-5.1C 6209 8-719-921-44 DIODE MTZJ-T-77-5.1C 6209 8-719-921-45 DIODE MTZJ-T-77-5.1C 6209 8-719-921-45 DIODE MTZJ-T-77-5.1C 6209 8-719-921-46 DIODE MTZJ-T-77-5.1C 6209 8-719-921-47 DIODE MTZJ-T-77-5.1C 6209 8-719-921-48 DIODE MTZJ-T-77-5.1C 6209 8-719-921-49 DIODE MTZJ-T-77-5.1C 6209 8-719-921-49 DIODE MTZJ-T-77-5.1C 6209 8-719-921-40	D624							1
8-719-10-03 8-719-110-03 BODDE DINL2DU-TA 8-719-110-03 BOTODE DINL2DU-TA 8-719-110-03 BOTODE DINL2DU-TA BODDE MTZJ-T-77-5A BODDE LNK0120022G (KV-32F\$12/32F\$16 ONLY) BODDE MTZJ-T-77-10B BODDE MTZJ-T-77-10B BODDE MTZJ-T-77-10B BODDE MTZJ-T-77-5.1C BODDE MTZJ-	D625							
S-719-110-03 DIODE MTZ.J-T-77-5.64 DIODE LINK0120022G S-719-10-70-80 DIODE LINK0120022G (KV-32FS12/32FS16 ONLY) (KV-27FV16/29FV16/29FV16C ONLY) (KV-27FV16/29FV16/29FV16C ONLY) (KV-27FV16/29FV16/29FV16C ONLY) (KV-29FV16/29FV16/29FV16/29FV16C ONLY) (KV-29FV16/29FV1	D626						,	,
628 8-719-510-48 DIODE D1N20R-TA 2001 8-719-070-80 DIODE L1N(0120022G (KV-32FS12/32FS16 ONLY) 2002 8-719-110-17 DIODE MTZ,J-T-77-10B 2003 8-719-108-12 DIODE RD9.1EW-T1 (KV-32FS12/32FS16 ONLY) 2004 8-719-921-44 DIODE MTZ,J-T-77-5.1C 2005 8-719-921-44 DIODE MTZ,J-T-77-5.1C 2006 8-719-921-44 DIODE MTZ,J-T-77-5.1C 2007 8-719-921-44 DIODE MTZ,J-T-77-5.1C 2008 8-719-921-44 DIODE MTZ,J-T-77-5.1C 2009 1-794-118-11 JACK BLOCK, PIN 3P 2004 1-794-116-11 JACK BLOCK, PIN 3P 2006 1-794-117-11 JACK BLOCK, PIN 2P 2008 1-794-117-11 JACK BLOCK, PIN 2P 2009 1-794-116-11 JACK BLOCK, PIN 2P 2009 1-794-118-11 JACK BLOCK, PIN 2P 2000 1-794-118-11 JACK BLOCK, PIN 2P 2001 1-794-118-11 JACK BLOCK, PIN 2P 2001 1-794-118-11 JACK BLOCK, PIN 2P 2002 1-794-118-11 JACK BLOCK, PIN 2P 2003 1-794-118-11 JACK BLOCK, PIN 2P 2004 1-794-118-11 JACK BLOCK, PIN 2P 2005 1-794-118-11 JACK BLOCK, PIN 2P 2006 1-794-118-11 JACK BLOCK, PIN 2P 2007 1-794-118-11 JACK BLOCK, PIN 2P 2008 1-794-118-11 JACK BLOCK, PIN 2P 2	- 0-0	0 1 10 000 10	5.0525 <u>220</u> 0					
628 8-719-510-48 DIODE D1N2OR-TA DIODE LNK0120022G (KV-32FS12/32FS16 ONLY) 2002 8-719-110-17 DIODE MTZJ-T-77-10B (KV-32FS12/32FS16 ONLY) 2003 8-719-108-12 DIODE RD9.1FW-T1 (KV-32FS12/32FS16 ONLY) 2004 8-719-921-44 DIODE MTZJ-T-77-5.1C (KV-32FS12/32FS16 ONLY) 2005 8-719-921-44 DIODE MTZJ-T-77-5.1C (KV-32FS12/32FS16 ONLY) 2006 8-719-921-44 DIODE MTZJ-T-77-5.1C (KV-32FS12/32FS16 ONLY) 2007 8-719-921-44 DIODE MTZJ-T-77-5.1C (KV-32FS12/32FS16 ONLY) 2008 8-719-921-44 DIODE MTZJ-T-77-5.1C (KV-32FS12/32FS16 ONLY) 2009 8-719-921-44 DIODE MTZJ-T-77-5.1C (KV-32FS12/32FS16 ONLY) 2009 8-719-921-44 DIODE MTZJ-T-77-5.1C (KV-32FS12/32FS16 ONLY) 2000 8-719-921-44 DIODE MTZJ-T-77-5.1C (KV-32FS12/32FS16 ONLY) 2000 8-719-921-44 DIODE MTZJ-T-77-5.1C (KV-32FS12/32FS16 ONLY) 2001 8-719-921-44 DIODE MTZJ-T-77-5.1C (KV-32FS12/32FS16 ONLY) 2002 1-794-118-11 JACK BLOCK, PIN 3P JACK	D627	8-719-110-03	DIODE MTZJ-T-77-7.5A			JACK		
J202 1-794-267-11 JACK, PIN 3P (KV-32FS12/32FS16 ONLY) J203 1-794-118-11 JACK BLOCK, PIN 3P (KV-32FS12/32FS16 ONLY) J204 1-794-118-11 JACK BLOCK, PIN 3P (KV-32FS12/32FS16 ONLY) J204 1-794-118-11 JACK BLOCK, PIN 3P (KV-32FS12/32FS16 ONLY) J204 1-794-118-11 JACK BLOCK, PIN 3P (KV-32FS12/32FS16 ONLY) J205 1-794-118-11 JACK BLOCK, PIN 3P (KV-27FV16/29FV16/29FV16C ONLY) J205 1-794-118-11 JACK BLOCK, PIN 3P J206 1-794-118-11 JACK BLOCK, PIN 3P J206 1-794-118-11 JACK BLOCK, PIN 3P J206 1-794-116-11 JACK BLOCK, PIN 3P J207 1-794-116-11 JACK BLOCK, PIN 3P J208	D628	8-719-510-48	DIODE D1N20R-TA					
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2004 8-719-921-44 DIODE MTZJ-T-77-5.1C	D2002	8-719-110-17	DIODE MTZJ-T-77-10B		1000	4 704 440 44	1	,
2004 8-719-921-44 2005 8-719-921-44 DIODE MTZJ-T-77-5.1C MX-296 MIZD MIZD MIZD MIZD MIZD MIZD MIZD MIZD	D2003	8-719-108-12	DIODE RD9.1EW-T1					
3-719-921-44 DIODE MTZJ-T-77-5.1C J205 1-794-116-11 JACK BLOCK, PIN 2P			(KV-32FS12/32FS16 ONLY)		J204	1-794-118-11		
FUSE FUSE 601	D2004	8-719-921-44	DIODE MTZJ-T-77-5.1C		IOOF	4 704 440 44	•	,
FUSE 601	D2005	8-719-921-44	DIODE MTZJ-T-77-5.1C					
FUSE 601								
CHIP CONDUCTOR (KV-29FV16/29FV16C ONLY) 601 Δ 1-576-193-11 FUSE 6.3A/125V (ALL EXCEPT KV-29FV16/29FV16C) FERRITE BEAD CHIP CONDUCTOR CHIP CONDUCTOR CHIP CONDUCTOR CHIP CONDUCTOR CHIP CONDUCTOR CHIP CONDUCTOR CHIP CONDUCTOR CHIP CONDUCTOR 1-216-295-91 SHORT (KV-27FV16/29FV16/29FV16C ONLY) SHORT SHORT SHORT (KV-27FV16/29FV16/29FV16/29FV16C ONLY) SHORT SHORT (KV-27FV16/29FV16/29FV16C ONLY) SHORT SHORT SHORT (KV-27FV16/29FV16/29FV16C ONLY) SHORT					J402	1-794-110-11	JACK BLOCK, PIN 2	² 7
KV-29FV16/29FV16C ONLY JR001 1-216-295-91 SHORT JR402 1-216-295-91 SHORT JR403 1-216-295-91 SHORT JR405 1-216-295-91 SHORT KV-27FV16/29FV16C ONLY JR405 1-216-295-91 SHORT JR405 1-216-295-91 SHORT JR405 1-216-295-91 SHORT JR411 1-216-295-91 SHORT JR411 1-216-295-91 SHORT JR411 1-216-295-91 SHORT JR471 JR471 1-216-295-91 SHORT JR471 JR471 1-216-295-91 SHORT JR471 JR471 1-216-295-91 SHORT JR471		<u>FUSE</u>						
KV-29FV16/29FV16C ONLY JR001 1-216-295-91 SHORT JR402 1-216-295-91 SHORT JR403 1-216-295-91 SHORT JR405 1-216-295-91 SHORT KV-27FV16/29FV16C ONLY JR405 1-216-295-91 SHORT JR405 1-216-295-91 SHORT JR405 1-216-295-91 SHORT JR411 1-216-295-91 SHORT JR411 1-216-295-91 SHORT JR411 1-216-295-91 SHORT JR471 JR471 1-216-295-91 SHORT JR471 JR471 1-216-295-91 SHORT JR471 JR471 1-216-295-91 SHORT JR471	E601 ∧	1-532-506-51	FUSE 6 31/250V			CHID CONDIT	CTOD	
Short Sho	1001	1-002-000-01				CUIL CONDO	<u>UIUK</u>	
SHORT SHO	F601 △	1-576-103-11			JR001	1-216-295-91	SHORT	
FERRITE BEAD FERRITE 1.1μH B502 1-410-397-21 FERRITE 1.1μH B503 1-410-397-21 FERRITE 1.1μH B503 1-410-397-21 FERRITE 1.1μH B600 1-412-911-11 FERRITE 0μH FERRIT	1001 43	1 010 100-11		FV16C)	JR002	1-216-295-91	SHORT	
FERRITE BEAD B501 1-410-397-21 FERRITE 1.1μH B502 1-410-397-21 FERRITE 1.1μH B503 1-410-397-21 FERRITE 1.1μH B503 1-410-397-21 FERRITE 1.1μH B600 1-412-911-11 FERRITE 0μH B601 1-412-911-11 FERRITE 0μH B601 1-412-911-11 FERRITE 0μH B703 1-216-295-91 SHORT (KV-27FV16/29FV16/29FV16C ONLY) B703 1-216-295-91 SHORT (KV-27FV16/29FV16/29FV16C ONLY) B703 1-216-295-91 SHORT			(ALL LAGE) 1 (V-20) V 10/20		JR402	1-216-295-91	SHORT	
Color					JR403	1-216-295-91	SHORT	
B501 1-410-397-21 FERRITE 1.1μH B502 1-410-397-21 FERRITE 1.1μH B503 1-410-397-21 FERRITE 1.1μH B500 1-412-911-11 FERRITE 0μH B600 1-412-911-11 FERRITE 0μH JR502 1-216-295-91 SHORT (KV-27FV16/29FV16/29FV16C ONLY) JR502 1-216-295-91 SHORT (KV-27FV16/29FV16/29FV16C ONLY)		FERRITE DE	V D		JR405	1-216-295-91		
B502 1-410-397-21 FERRITE 1.1μH JR411 1-216-295-91 SHORT B503 1-410-397-21 FERRITE 1.1μH JR471 1-216-295-91 SHORT B600 1-412-911-11 FERRITE 0μH (KV-27FV16/29FV16/29FV16C ONLY) B601 1-412-911-11 FERRITE 0μH JR502 1-216-295-91 SHORT		I FIVUILE DEV	<u>ער</u>				(KV-27FV16/29FV16	6/29FV16C ONLY)
B502 1-410-397-21 FERRITE 1.1μH JR411 1-216-295-91 SHORT B503 1-410-397-21 FERRITE 1.1μH JR471 1-216-295-91 SHORT B600 1-412-911-11 FERRITE 0μH (KV-27FV16/29FV16/29FV16C ONLY) B601 1-412-911-11 FERRITE 0μH JR502 1-216-295-91 SHORT	FB501	1-410-397-21	FERRITE 1.1µH					
1-412-911-11 FERRITE 0μH (KV-27FV16/29FV16/29FV16C ONLY) B601 1-412-911-11 FERRITE 0μH JR502 1-216-295-91 SHORT	FB502							
B601 1-412-911-11 FERRITE 0µH JR502 1-216-295-91 SHORT	FB503	1-410-397-21	FERRITE 1.1µH		JR471	1-216-295-91		
B601 1-412-911-11 FERRITE 0µH JR502 1-216-295-91 SHORT	FB600	1-412-911-11	FERRITE 0µH				•	6/29FV16C ONLY)
B602 1-412-911-11 FERRITE 0µH JR503 1-216-295-91 SHORT	FB601	1-412-911-11						
	FB602	1-412-911-11	FERRITE 0µH		JR503	1-216-295-91	SHORT	



The components identified by shading and mark \triangle are critical for safety. Replace only with part number specified.

Note:

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION		REMARK	
R505	1-216-295-91	SHORT		Q411	8-729-216-22	TRANSISTOR 2SB	709A-QRS-1	ГΧ	
R522	1-216-295-91	SHORT		Q501	8-729-140-50	TRANSISTOR 2SC	3209LK-TP		
R523	1-216-295-91	SHORT			8-729-046-07				
R526	1-216-295-91	SHORT		2002	0.200.00.	(KV-27FV16/29FV1		ONLY)	
R527	1-216-295-91	SHORT		Q502 A	8-729-045-26	TRANSISTOR 2SD		OIVL1)	
NJ21	1-210-295-91	SHORT		Q302 A	0-129-043-20				
				Q503	8-729-422-27	(KV-32FS12/32FS1 TRANSISTOR 2SD6	,	гу	
	COIL			Q000	0-123-422-21	TRANSISTOR 20DI	JUIA-QINO-I	IΛ	
				Q504	8-729-809-29	TRANSISTOR 2SC	4159-E		
101	1-412-029-11	INDUCTOR CHIP	10µH	Q505 △	8-729-200-17	TRANSISTOR 2SA	1091O-TPE	2	
102	1-412-032-11	INDUCTOR CHIP	100µH	Q506 △	8-729-422-27	TRANSISTOR 2SD	601A-QRS-1	ГХ	
103	1-412-029-11	INDUCTOR CHIP	10µH	Q507 🛆	8-729-216-22	TRANSISTOR 2SB	709A-QRS-1	ГХ	
503	1-406-677-11	INDUCTOR	10mH	Q601	8-729-922-37	TRANSISTOR 2SD	2144S-TP-U	IVW	
506	1-406-677-11	INDUCTOR	10mH						
				Q602	8-729-423-33	TRANSISTOR 2SC	3311A-QRS	TA	
604	1-412-525-31	INDUCTOR	10μH	Q603	8-729-119-76	TRANSISTOR 2SA	1309A-QRS	TA	
505	1-406-978-11	INDUCTOR	150µH	Q604	8-729-422-27	TRANSISTOR 2SD			
		(KV-27FV16/29FV16			8-729-046-40	TRANSISTOR 2SK			
05	1-406-976-11	INDUCTOR	68µH	Q606	8-729-422-27	TRANSISTOR 2SD		ГХ	
		(KV-32FS12/32FS16		2000	0-120 -4 22-21	TAMINOID FOR ZODI	JV IA-QI\ 0 *	17	
10 🛆	1-412-528-11	INDUCTOR	18µH	0607	0 700 000 07	TRANSISTOR 2SD	יי חד פאאפ	1\/\\/	
02	1-412-552-11	INDUCTOR	2.2mH	Q607	8-729-922-37				
02	1-412-332-11	INDUCTOR	Z.ZIIIП	Q608	8-729-422-27	TRANSISTOR 2SD			
07	4 440 550 44	INDUOTOR	0.011	Q609	8-729-423-33	TRANSISTOR 2SC	3311A-QRS	IA	
07	1-412-552-11	INDUCTOR	2.2mH						
03	1-412-529-11	INDUCTOR	22µH						
05	1-412-529-11	INDUCTOR	22µH		RESISTOR				
04	1-412-533-21	INDUCTOR	47μH		KEOIOTOK				
01	1-409-955-11	INDUCTOR	8mH	R105	1-216-065-91	RES-CHIP	4.7K	5%	1/10V
				R107	1-216-025-91	RES-CHIP	100	5%	1/10V
				R108	1-216-025-91	RES-CHIP	100	5%	1/10V
				R115	1-216-295-91	SHORT		-,-	
	PHOTO COUF	PI FR		R201	1-216-113-00	RES-CHIP	470K	5%	1/10V
			C422EV2						
ו טסר	8-749-010-64	PHOTO COUPLER P	G123F12	R202	1-216-113-00	RES-CHIP	470K	5%	1/10V
				R204	1-216-081-00	RES-CHIP	22K	5%	1/10V
				R205	1-216-085-00	RES-CHIP	33K	5%	1/10V
	IC LINK			R208	1-215-924-00	METAL OXIDE	15K	5%	3 W
				R214	1-216-113-00	RES-CHIP	470K	5%	1/10V
3401 △	1-532-686-21	LINK, IC 2.7A/150V							
		(KV-27FV16/29FV16	/29FV16C ONLY)	R215	1-216-113-00	RES-CHIP	470K	5%	1/10V
401 △	1-576-336-21	LINK, IC		R218	1-216-025-91	RES-CHIP	100	5%	1/10V
		(KV-32FS12/32FS16	ONLY)			(KV-27FV16/29FV1			
				R221	1-216-033-00	•	220	5%	1/10V
				INZZ I	1-210-033-00	(KV-27FV16/29FV1			1/101
	TRANSISTOR	1		D004	1 016 005 04	,		- /	4/401
	II\ANSISTUR	1		R224	1-216-065-91		4.7K	5%	1/10V
01	8-729-422-27	TRANSISTOR 2SD60	1A-QRS-TX			(KV-27FV16/29FV1		- /	
01	-	TRANSISTOR 2SB70		R225	1-216-065-91	RES-CHIP	4.7K	5%	1/10\
U 1	0 120 210-22	(KV-27FV16/29FV16				(KV-27FV16/29FV1	6/29FV16C	ONLY)	
ne ne	0 700 400 07	•	'	- [
05	8-729-422-27	TRANSISTOR 2SD60		R226	1-216-022-00	RES-CHIP	75	5%	1/10V
		(KV-27FV16/29FV16	'		30	(KV-27FV16/29FV1			
06	8-729-422-27	TRANSISTOR 2SD60		R227	1-216-113-00	RES-CHIP	470K	5%	1/10V
		(KV-27FV16/29FV16	/29FV16C ONLY)	1\221	1-210-110-00				1/100
01	8-729-216-22	TRANSISTOR 2SB70	9A-QRS-TX	Door	1 016 140 00	(KV-27FV16/29FV1			4/401
		(KV-27FV16/29FV16		R228	1-216-113-00	RES-CHIP	470K	5%	1/10V
		,	,			(KV-27FV16/29FV1			
02	8-720-216-22	TRANSISTOR 2SB70	9A-ORS-TX	R229	1-216-113-00		470K	5%	1/10V
U <u>L</u>	0.179-710-77					(KV-27FV16/29FV1	6/29FV16C	ONLY)	
40	0 700 400 07	(KV-27FV16/29FV16	'						
110	8-729-422-27	TRANSISTOR 2SD60	1A-QRS-TX						

Note:

The components identified by shading and mark \triangle are critical for safety. Replace only with part number specified.



REF.NO.	PART NO.	DESCRIPTION	R	EMARK		REF.NO.	PART NO.	DESCRIPTION	R	EMARK	
R231	1-216-069-00	RES-CHIP	6.8K	5%	1/10W	R447	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
		(KV-27FV16/29FV16	S/29FV16C (NI Y)		R454	1-216-025-91	RES-CHIP	100	5%	1/10W
R232	1-216-069-00	RES-CHIP	6.8K	5%	1/10W	R501	1-249-425-11	CARBON	4.7K	5%	1/4W
INZOZ	1 210 003 00	(KV-27FV16/29FV16			1/ 1011		1-216-455-21	METAL OXIDE	560	5%	2W
DOOF	4 040 440 00	•		,	4/40\\\						
R235	1-216-113-00	RES-CHIP (KV-32FS12/32FS16	470K S ONLY)	5%	1/10W	R503 △	1-249-425-11	CARBON	4.7K	5%	1/4W
R237	1-216-033-00	RES-CHIP	220	5%	1/10W	R505	1-249-401-11	CARBON	47	5%	1/4W
		(KV-32FS12/32FS16	ONLY)			R506 △	1-215-883-11	METAL OXIDE	33	5%	2W
R238	1-216-033-00	RES-CHIP	220	5%	1/10W		1-260-328-11	CARBON	1K	5%	1/2W
11200	1 210 000 00	(KV-32FS12/32FS16		0,0	1/1011	R508	1-247-863-91	CARBON	22K	5%	1/4W
		(111 021 012/021 011	ONLI				1-215-891-11	METAL OXIDE	680	5%	2W
R239	1-216-113-00	RES-CHIP	470K	5%	1/10W	K309 213	1-213-091-11	IVIE TAL ONIDE	000	3/0	ZVV
NZ39	1-210-113-00	(KV-32FS12/32FS16		3/0	1/ 1000	R510	1-249-411-11	CARBON	330	5%	1/4W
D404	4 040 000 00	•	,	5 0/	4/40/4/			-			
R401	1-216-080-00	RES-CHIP	20K	5%	1/10W	R511	1-249-377-11	CARBON	0.47	5%	1/4W
		(KV-27FV16/29FV16		,		R512	1-215-910-00	METAL OXIDE	68	5%	3W
R402	1-216-073-00	RES-CHIP	10K	5%	1/10W	R513 △	1-215-907-11		22	5%	3W
		(KV-27FV16/29FV16	3/29FV16C C	NLY)				(KV-27FV16/29FV16	6/29FV16C (ONLY)	
R403	1-216-065-91	RES-CHIP	4.7K	5%	1/10W	R513 △	1-215-905-11	METAL OXIDE	10	5%	3W
		(KV-27FV16/29FV16	6/29FV16C C	NLY)				(KV-32FS12/32FS16	ONLY)		
R404	1-216-065-91	RES-CHIP	4.7K	5%	1/10W			,	,		
		(KV-27FV16/29FV16			.,	R514	1-216-683-11	METAL CHIP	22K	0.50%	1/10W
		(11.7 21.7 10.201 7 11	,, <u>201 1 100 0</u>	,,, <u>,</u>		1011	1 210 000 11	(KV-27FV16/29FV16			1,1011
R407	1-216-025-91	RES-CHIP	100	5%	1/10W	R514	1-216-071-00	•	8.2K	5%	1/10W
N 4 01	1-210-025-91	(KV-27FV16/29FV16			1/ 1000	No14	1-210-071-00			3/0	1/1044
D.400	4 040 005 04	`		,	4/40/4/	DE40	4 040 405 44	(KV-32FS12/32FS16	,	5 0/	4/4/4/
R408	1-216-025-91	RES-CHIP	100	5%	1/10W	R516	1-249-425-11	CARBON	4.7K	5%	1/4W
		(KV-27FV16/29FV16		,		R517	1-215-445-00	METAL	10K	1%	1/4W
R411	1-249-417-11	CARBON	1K	5%	1/ 4 W	R518	1-249-427-11	CARBON	6.8K	5%	1/4W
R412	1-216-113-00	RES-CHIP	470K	5%	1/10W			(KV-27FV16 ONLY)			
R413	1-216-113-00	RES-CHIP	470K	5%	1/10W						
						R518	1-215-439-00	METAL	5.6K	1%	1/4W
R414	1-249-417-11	CARBON	1K	5%	1/4W			(ALL EXCEPT KV-2	7FV16)		
R421	1-249-425-11	CARBON	4.7K	5%	1/4W	R519	1-249-427-11	CARBON	6.8K	5%	1/4W
R420	1-208-796-11	METAL CHIP	3.9K	0.50%	1/10W			(KV-27FV16/29FV16			.,
11120	1 200 100 11	(KV-32FS12/32FS16		0.0070	1/1011	R519	1-215-439-00	METAL	5.6K	1%	1/4W
R422	1-249-389-11	CARBON	4.7	5%	1/4W	1013	1-210-400-00	(KV-32FS12/32FS16		170	1/777
	1-249-369-11	-	4.7 22		1/4VV 1/10W	DE20 A	1 015 004 11			E0/	2W
R426	1-216-009-91	RES-CHIP	22	5%	1/1000		1-215-884-11	METAL OXIDE	47	5%	
						R521	1-249-413-11	CARBON	470	5%	1/4W
R429	1-216-113-00	RES-CHIP	470K	5%	1/10W	_					
R430	1-216-049-91		1K	5%	1/10W	R522	1-249-417-11		1K	5%	1/4W
R431	1-216-049-91	RES-CHIP	1K	5%	1/10W	R523	1-216-073-00	RES-CHIP	10K	5%	1/10W
R433	1-216-113-00	RES-CHIP	470K	5%	1/10W	R524	1-249-429-11	CARBON	10K	5%	1/4W
R436	1-216-065-91	RES-CHIP	4.7K	5%	1/10W	R525 △	1-208-804-11	METAL CHIP	8.2K	0.50%	1/10W
						R526	1-208-814-91	METAL CHIP	22K	0.50%	1/10W
R437	1-216-073-00	RES-CHIP	10K	5%	1/10W			-			
11101	1 210 010 00	(KV-27FV16/29FV16			1/1011	R528	1-215-429-00	METAL	2.2K	1%	1/4W
R437	1-216-065-91	RES-CHIP	4.7K	5%	1/10W	R529	1-216-109-00		330K	5%	1/10W
11401	1-210-000-91			J/0	1/ 1000	1,029	1-210-103-00				1/1044
D.400	4 040 005 01	(KV-32FS12/32FS16		rn/	4/40141	DEGG	4 040 407 00	(KV-27FV16/29FV16		,	4/40144
R438	1-216-065-91	RES-CHIP	4.7K	5%	1/10W	R529	1-216-107-00		270K	5%	1/10W
R439	1-216-073-00	RES-CHIP	10K	5%	1/10W	1		(KV-32FS12/32FS16	,		
		(KV-27FV16/29FV16		,		R530	1-216-077-91	RES-CHIP	15K	5%	1/10W
R439	1-216-065-91	RES-CHIP	4.7K	5%	1/10W			(KV-27FV16/29FV16	6/29FV16C C	ONLY)	
		(KV-32FS12/32FS16	ONLY)			R530	1-208-812-11	•	18K	0.50%	1/10W
		,	,			1		(KV-32FS12/32FS16			
R440	1-216-097-91	RES-CHIP	100K	5%	1/10W	1		, 3, 010			
R441	1-216-081-00	RES-CHIP	22K	5%	1/10W	R532	1-215-437-00	METAL	4.7K	1%	1/4W
R442		RES-CHIP	100	5% 5%	1/10W	R533	1-215-457-00	METAL	33K	1%	1/4W
	1-216-025-91					ROSS	1-213-437-00				1/ 4 VV
R445	1-216-073-00	RES-CHIP	10K	5%	1/10W	1		(KV-27FV16/29FV16	0/29FV10U (JNL T)	
R446	1-215-457-00	METAL	33K	1%	1/4W	1					



The components identified by shading and mark \triangle are critical for safety. Replace only with part number specified.

Note:

The components identified by \blacksquare in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding x-ray radiation. Should replacement be required, replace only with the value originally used.

REF.N	0.	PART NO.	DESCRIPTION	RE	MARK		REF.N	0.	PART NO.	DESCRIPTION	RE	MARK	
R533		1-215-453-00	METAL	22K	1%	1/4W	R608		1-240-205-11	CARBON	22M	5%	1/2W
			(KV-32FS12/32FS16	ONLY)			R609		1-216-049-91	RES-CHIP	1K	5%	1/10W
R534		1-215-458-00	METAL	36K	1%	1/4W	R610		1-216-073-00	RES-CHIP	10K	5%	1/10W
11001		1 210 100 00	(KV-27FV16/29FV16/			.,	R611		1-216-089-91	RES-CHIP	47K	5%	1/10W
R534		1-215-457-00	METAL	33K	1%	1/4W	R612		1-216-045-00	RES-CHIP	680	5%	1/10W
K004		1-213-437-00	(KV-32FS12/32FS16		170	1/ 4 VV	KOIZ		1-210-040-00	KES-CHIP	000	370	1/1000
R535		1-249-441-11	CARBON	100K	5%	1/4W	R613	Λ	1-219-512-11	CARBON	2.2M	5%	1/2W
	Λ	1-214-798-21	METAL	1.8	1%	1/2W	R614	-	1-249-413-11	CARBON	470	5%	1/4W
11000		121170021	IVIL 171L	1.0	170	1/211	R615	Λ	1-218-265-11	METAL	8.2M	5%	1W
R537		1-249-401-11	CARBON	47	5%	1/4W	11010	243	1-210-200-11	(KV-29FV16/29FV16C		J/0	IVV
R538	Δ	1-215-889-00	METAL OXIDE	330	5%	2W	R616	Δ.	1-260-302-51	CARBON	6.8	5%	1/2W
	<u> </u>							<u> </u>					
R539		1-249-385-11	CARBON	2.2	5%	1/4W	R617		1-216-009-91	RES-CHIP	22	5%	1/10W
R540		1-215-445-00	METAL	10K	1%	1/4W				0.000			
R541		1-249-429-11	CARBON	10K	5%	1/4W	R618		1-249-440-11	CARBON	82K	5%	1/4W
							R619		1-249-437-11	CARBON	47K	5%	1/4W
R543		1-247-887-00	CARBON	220K	5%	1/4W	R620		1-249-417-11	CARBON	1K	5%	1/4W
R544		1-249-377-11	CARBON	0.47	5%	1/4W	R621	\triangle	1-240-251-11	CEMENTED	6.8	5%	10W
R545		1-215-873-00	METAL OXIDE	4.7K	5%	1W	R622		1-249-441-11	CARBON	100K	5%	1/4W
R546	Δ	1-249-377-11	CARBON	0.47	5%	1/4W							
R547		1-216-455-21	METAL OXIDE	560	5%	2W	R623	Δ	1-260-324-11	CARBON	470	5%	1/2W
			-				R624	Λ	1-249-429-11	CARBON	10K	5%	1/4W
R548		1-216-377-11	METAL OXIDE	4.7	5%	2W	R625		1-249-437-11	CARBON	47K	5%	1/4W
R549	Λ	1-260-288-11	CARBON	0.47	5%	1/2W	R626	Λ	1-220-926-11	FUSIBLE	0.47	10%	1/2W
R550		1-260-288-11	CARBON	0.47	5%	1/2W	R627	~	1-215-479-00	METAL	270K	1%	1/4W
R551	<u> </u>	1-215-907-11	METAL OXIDE	22	5%	3W	NOZ1		1-213-479-00	(KV-29FV16/29FV16C		1/0	1/ 1 V V
	^									(NV-29FV10/29FV10C	ONLT)		
R553	△\	1-216-363-00	METAL OXIDE	0.33	5%	2W	D007		4 04 5 400 00		00017	407	4/04/
			0.550	1.017			R627		1-215-483-00	METAL	390K	1%	1/4W
R554		1-249-429-11	CARBON	10K	5%	1/4W				(ALL EXCEPT KV-29F		,	
R555		1-247-895-91	CARBON	470K	5%	1/4W	R628		1-215-479-00	METAL	270K	1%	1/4W
R556	Δ	1-249-417-11	CARBON	1K	5%	1/4W				(ALL EXCEPT KV-27	-V16)		
R557	\triangle	1-247-895-91	CARBON	470K	5%	1/4W	R630		1-249-421-11	CARBON	2.2K	5%	1/4W
R558	\triangle	1-216-097-91	RES-CHIP	100K	5%	1/10W	R631		1-215-929-11	METAL OXIDE	100K	5%	3W
										(KV-29FV16/29FV16C	ONLY)		
R559	Δ	1-216-073-00	RES-CHIP	10K	5%	1/10W	R632	Δ	1-217-611-00	METAL	0.1	10%	2W
R560	Δ	1-215-902-11	METAL OXIDE	47K	5%	1W							
R561		1-249-406-11	CARBON	120	5%	1/4W	R633		1-249-415-11	CARBON	680	5%	1/4W
R562		1-208-808-11	METAL CHIP	12K	0.50%	1/10W	R634		1-216-073-00	RES-CHIP	10K	5%	1/10W
R563		1-247-863-91	CARBON	22K	5%	1/4W	R635		1-216-057-00	RES-CHIP	2.2K	5%	1/10W
11000		1 247 000 01	O/ II (DOI)	ZZI	3 /0	1/744		Λ	1-216-485-11	METAL OXIDE	5.6K	5%	3W
■ R564	A	1-208-836-11	METAL CHIP	180K	0.50%	1/10\\\	11001	45	1-210-400-11	(KV-29FV16/29FV16C		J/0	SVV
△1\00 1	213	1-200-030-11	(KV-27FV16/29FV16/			1/1044	R638		1-249-402-11	CARBON	56	5%	1/4W
DEG4	Δ	1 200 024 11			,	4/40\\\	1,000		1-243-402-11			3/0	1/47 V
M K304	<u> </u>	1-208-824-11	METAL CHIP	56K	0.50%	1/10W				(KV-29FV16/29FV16C	ONLT)		
D=0=		4.040.400.41	(KV-32FS12/32FS16		F 0/	4/4/84	Door		4 0 40 000 41	OADDON	00	F 0/	4 (4) 4 (
R565		1-249-429-11	CARBON	10K	5%	1/4W	R638		1-249-399-11		33	5%	1/4W
R566		1-216-073-00	RES-CHIP	10K	5%	1/10W				(ALL EXCEPT KV-29F		,	
R567	Δ	1-216-073-00	RES-CHIP	10K	5%	1/10W	R639		1-249-421-11	CARBON	2.2K	5%	1/4W
							R640		1-249-417-11	CARBON	1K	5%	1/4W
	\triangle	1-215-882-00	METAL OXIDE	22	5%	2W	R641	\triangle	1-216-369-00	METAL OXIDE	1	5%	2W
R569		1-214-798-21	METAL	1.8	1%	1/2W	R642		1-216-089-91	RES-CHIP	47K	5%	1/10W
R570		1-247-863-91	CARBON	22K	5%	1/4W							
R571		1-216-065-91	RES-CHIP	4.7K	5%	1/10W	R643		1-249-419-11	CARBON	1.5K	5%	1/4W
R572		1-216-065-91	RES-CHIP	4.7K	5%	1/10W	R644		1-247-843-11	CARBON	3.3K	5%	1/4W
•							R645		1-215-898-11	METAL OXIDE	10K	5%	2W
R601	Λ	1-219-513-11	CARBON	4.7M	5%	1/2W	R646		1-249-418-11		1.2K	5%	1/4W
1.501		. 210 010 11	(ALL EXCEPT KV-29			.,,	'\\\		. 2.0 110 11	(KV-29FV16/29FV16C		3/0	4
R602	Α	1-249-389-11	CARBON	4.7	5%	1/4W	R646		1-249-419-11	,	1.5K	5%	1/4W
R603	<u> </u>	1-249-369-11	METAL	4.7 470K		1/4VV 1/4W	1.040		1-47-417-11				1/ " V V
					1% 5%					(ALL EXCEPT KV-29F	V 10/29FV 10)()	
R607		1-215-859-00	METAL OXIDE	22	5%	1W	I						

Note:

The components identified by shading and mark riangle are critical for safety. Replace only with part number specified.

Les composants identifies per un trame et une marque $\ensuremath{\triangle}$ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.



REF.NO.	PART NO.	DESCRIPTION	R	EMARK		REF.NO.	PART NO.	DESCRIPTION	REMARK
R648	1-216-397-11	METAL OXIDE	4.7	5%	3 W	T503 🛮	1-426-981-11	TRANSFORMER, FERRIT	TE (PMT)
		(KV-27FV16/29FV16/	/29FV16C C	ONLY)		T504 🛭	1-431-693-11	TRANSFORMER, HORIZO	ONTAL LINEAR
R648	1-215-908-00	METAL OXIDE	33	5%	3W			(KV-27FV16/29FV16/29F	V16C ONLY)
		(KV-32FS12/32FS16	ONLY)			T504 🛮	1-435-098-11	TRANSFORMER, HORIZO	ONTAL LINEAR
R649	1-249-417-11	CARBON	1K	5%	1/4W			(KV-32FS12/32FS16 ONL	_Y)
R650	1-216-387-11	METAL OXIDE	0.68	5%	3W	T505 🛭	1-453-310-11	FBT ASSY NX-4521//X4J	14
R651	1-249-429-11	CARBON	10K	5%	1/4W			(KV-27FV16/29FV16/29F	V16C ONLY)
						T505 🛮	1-453-338-11	FBT ASSY, NX-4600//X4	J4
R653	1-216-049-91	RES-CHIP	1K	5%	1/10W			(KV-32FS12/32FS16 ONI	_Y)
R655	1-216-049-91		1K	5%	1/10W				
R656	1-249-429-11	CARBON	10K	5%	1/4W	T602 🛮	1-426-717-11	TRANSFORMER, LINE FI	LTER (LFT)
R658	1-216-387-11	-	0.68	5%	3W			(KV-29FV16/29FV16C Of	
R659	1-215-857-11	METAL OXIDE	10	5%	1W	T602 \(\triangle{2} \)	1-435-617-11	TRANSFORMER, LINE F	
								(ALL EXCEPT KV-29FV1	
R660 △	1-216-485-11	METAL OXIDE	5.6K	5%	3W	T603 🛮	1-435-402-11	TRANSFORMER, CONVE	, ,
		(KV-29FV16/29FV16	,					(KV-29FV16/29FV16C Of	,
R660 △	1-215-924-00	METAL OXIDE	15K	5%	3W	T603 \(\triangle{2} \)	1-435-403-11	TRANSFORMER, CONVE	, ,
		(ALL EXCEPT KV-29		,				(ALL EXCEPT KV-29FV1	,
R661	1-216-057-00		2.2K	5%	1/10W	T604 \(\text{\(\text{\) \}}}}}} \end{\(\text{\(\text{\) \\ \eth}}} \end{\(\text{\\ \eth}}} \end{\(\text{\(\text{\(\text{\(\text{\(\text{\} \text{\(\text{\(\text{\) \}}}}} \end{\(\text{\(\text{\(\text{\(\text{\) \eth}}}}} \end{\(\text{\) \eth}}} \end{\(\text{\(\text{\) \eth}}}} \end{\(\text{\(\text{\) \eth}}}} \end{\(\text{\(\text{\) \eth}}}}} \end{\(\text{\(\text{\) \eth}}}} \end{\(\text{\) \eth}}} \end{\(\text{\(\text{\(\text{\(\text{\(\text{\(\) \eth}}}} \end{\(\text{\(\text{\) \eth}}}} \end{\(\text{\(\text{\) \eth}}}} \end{\(\text{\(\text{\(\text{\) \eth}}}} \end{\(\text{\) \eth}} \end{\(\text{\(\text{\(\text{\) \eth}}}} \end{\(\text{\(\text{\) \eth}}} \end{\(\text{\(\text{\) \eth}}} \end{\(\text{\(\text{\) \eth}}} \end{\(\text{\(\text{\)}}} \end{\(\text{\(\text{\) \eth}}} \end{\(\text{\) \eth}} \end{\(\text{\) \eth}} \end{\(\text{\(\text{\) \eth}} \end{\(\text{\) \eth}} \end{\(\text{\) \eth}}} \(\text{\)	1-431-852-11	TRANSFORMER, CONVE	:RTER (SRT)
R662 △	1-216-485-11	METAL OXIDE	5.6K	5%	3W				
Daga		(KV-29FV16/29FV16	•	= 0.4	4/4014/				
R663	1-216-081-00	RES-CHIP	22K	5%	1/10W		THERMISTO	<u>R</u>	
D004	4 040 007 44	METAL OVIDE	4.7	F 0/	au	TH501	1-800-193-00	THERMISTOR	
R664	1-216-397-11	METAL OXIDE	4.7	5%	3W		1-803-586-11	THERMISTOR, NTC	
D0004	4 040 057 00	(KV-27FV16/29FV16/ RES-CHIP		,	4/40\4	111001 2	2 1-003-300-11	THEIRWISTON, NTO	
R2001	1-216-057-00	(KV-32FS12/32FS16	2.2K	5%	1/10W				
R2002	1-216-053-00	RES-CHIP	1.5K	5%	1/10W		THEDMISTO	n	
NZUUZ	1-210-055-00	(KV-32FS12/32FS16		3/0	1/1000		THERMISTO	<u>7</u>	
R2003	1-249-425-11	CARBON	4.7K	5%	1/4W	THP601	△ 1-803-540-11	THERMISTOR	
R2004	1-216-069-00	RES-CHIP	6.8K	5%	1/10W				
112004	1 210 000 00	(KV-32FS12/32FS16		3/0	1/1000				
R2005	1-216-295-91	SHORT	ONLI				TUNER		
112000	1 210 200 01	(KV-32FS12/32FS16	ONLY)						
		(02. 0.2/02/07/0				TU101 🛭	8-598-431-30	TUNER, FSS BTF-WA411	
						1			

RELAY

RY601 △	1-755-198-11	RELAY
RY602 △	1-755-266-11	RELAY, AC POWER

SWITCH

S2007	1-762-816-11	SWITCH, TACTILE
		(KV-32FS12/32FS16 ONLY)
S2008	1-762-816-11	SWITCH, TACTILE
		(KV-32FS12/32FS16 ONLY)

SWITCH

SW501	1-572-707-11	SWITCH, LEVER
SW502	1-572-707-11	SWITCH, LEVER

TRANSFORMER

T501	Δ	1-437-195-11	TRANSFORMER.	. HORIZONTAL DRIVE
1001	2.5	1- 1 01-100-11	TINAINOI OINIVILIN	, HONEONIAL DINIVL

VARISTOR

VDR601 A 1-803-967-11	VARISTOR (ENE621D-14A)
	(KV-29FV16/29FV16C ONLY)
VDR601 A 1-803-585-11	VARISTOR ENE271D-10A
	(ALL EXCEPT KV-29FV16/29FV16C)



A-1131-593-A BC MOUNTED PC BOARD (ALL EXCEPT KV-32FS12/32FS16)

CAPACITOR

C3500	1-165-319-11	CERAMIC CHIP	0.1µF		50V
C3501	1-163-231-11	CERAMIC CHIP	15PF	5%	50V
C3502	1-165-319-11	CERAMIC CHIP	0.1uF		50V



Nota:

The components identified by shading and mark \triangle are critical for safety. Replace only with part number specified.

Note:

REF.NO.	PART NO.	DESCRIPTION	ı	REMARK		REF.NO.	PART NO.	DESCRIPTION		REMARK	
									0.04 5	T(Em) (I(I)	
C3504	1-163-102-00	CERAMIC CHIP	24PF	5%	50V	C3559	1-163-031-11	CERAMIC CHIP	0.01µF	2021	50V
C3505	1-163-102-00	CERAMIC CHIP	24PF	5%	50V	C3560	1-104-664-11	ELECT	47μF	20%	16V
C3506	1-165-319-11	CERAMIC CHIP	0.1µF		50V	C3561	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C3507	1-165-319-11	CERAMIC CHIP	0.1µF		50V	C3562	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C3509	1-163-038-91	CERAMIC CHIP	0.1µF		25V	C3563	1-104-664-11	ELECT	47µF	20%	16V
C3510	1-163-131-00	CERAMIC CHIP	390PF	5%	50V	C3564	1-104-664-11	ELECT	47μF	20%	16V
						C3565	1-163-031-11	CERAMIC CHIP	0.01µF		50V
C3511	1-163-038-91	CERAMIC CHIP	0.1µF		25V	C3566	1-163-031-11	CERAMIC CHIP	0.01µF		50V
						C3300	1-103-031-11	CENAIVIIC CI IIF	0.01μΓ		30 V
C3512	1-165-319-11	CERAMIC CHIP	0.1µF		50V						
C3513	1-216-295-91	SHORT									
C3514	1-163-031-11	CERAMIC CHIP	0.01µF		50V		CONNECTOR				
C3515	1-165-319-11	CERAMIC CHIP	0.1µF		50V						
						CN3500*	1-691-632-21	CONNECTOR, BOAR	RD TO BO	ARD 15P	
C3516	1-165-319-11	CERAMIC CHIP	0.1µF		50V						
C3517	1-126-924-11	ELECT	330µF	20%	6.3V						
C3518	1-163-038-91	CERAMIC CHIP	0.1μF	2070	25V						
							EEDDITE DE	4 D			
C3519	1-165-319-11	CERAMIC CHIP	0.1µF		50V		FERRITE BE	<u>AD</u>			
C3520	1-165-319-11	CERAMIC CHIP	0.1µF		50V	FB3500	1-414-234-22	INDUCTOR CHIP	0μH		
C3521	1-163-237-11	CERAMIC CHIP	27PF	5%	50V	FB3501	1-414-234-22	INDUCTOR CHIP	0μH		
C3522	1-104-664-11	ELECT	47µF	20%	16V	FB3502	1-414-234-22		0μΗ		
C3523	1-165-319-11	CERAMIC CHIP	0.1µF		50V	FB3503	1-414-234-22	INDUCTOR CHIP	0μH		
C3524	1-165-319-11	CERAMIC CHIP	0.1µF		50V	FB3504	1-414-234-22	INDUCTOR CHIP	0μΗ		
C3525	1-163-038-91	CERAMIC CHIP	0.1µF		25V						
00020	1-100-000-01	OLIVAINIO OFIII	υ. ιμι		201	FB3505	1-414-234-22	INDUCTOR CHIP	0µH		
00500	4 405 040 44	OED AMIO OLUD	0.4		F0\/	FB3506	1-414-234-22	INDUCTOR CHIP	0μΗ		
C3526	1-165-319-11	CERAMIC CHIP	0.1µF		50V	FB3507	1-414-234-22	INDUCTOR CHIP	0μH		
C3527	1-165-319-11	CERAMIC CHIP	0.1µF		50V	FB3508	1-414-234-22	INDUCTOR CHIP	0μΗ		
C3528	1-165-319-11	CERAMIC CHIP	0.1µF		50V	FB3300	1-414-234-22	INDUCTOR GLIF	υμιι		
C3529	1-165-319-11	CERAMIC CHIP	0.1µF		50V						
C3530	1-104-664-11	ELECT	47µF	20%	16V						
			·				<u>FILTER</u>				
C3531	1-165-319-11	CERAMIC CHIP	0.1µF		50V						
C3532	1-126-964-11	ELECT	10μF	20%	50V	FL3500		FILTER, LOW PASS			
C3533	1-163-133-00	CERAMIC CHIP	470PF	5%	50V	FL3502	1-239-848-21	FILTER, LOW PASS			
						FL3503	1-239-848-21	FILTER, LOW PASS			
C3534	1-126-960-11	ELECT	1µF	20%	50V	FL3504	1-233-512-21	FERRITE	37µH		
C3535	1-163-231-11	CERAMIC CHIP	15PF	5%	50V	FL3505	1-233-512-21	FERRITE	37µH		
						FL3506	1-233-512-21		37µH		
C3536	1-126-960-11	ELECT	1µF	20%	50V	1 23000	1-200-012-21	LIMMIL	σιμιι		
C3539	1-163-231-11	CERAMIC CHIP	15PF	5%	50V						
C3541	1-163-106-00	CERAMIC CHIP	36PF	5%	50V						
C3542	1-126-964-11	ELECT	10µF	20%	50V		<u>IC</u>				
C3543	1-164-505-11	CERAMIC CHIP	2.2μF	2070	16V			10.1155.45			
00040	1-10 1 -000-11	OLIVAINIO OLIII	<i>-</i> μι		101	IC3500		IC UPD424210LE-60			
00540	4 400 004 44	OED ANIO OLUB	4EDE	5 0/	F0\/	IC3501		IC UPD64082GF-3BA	Ą		
C3546	1-163-231-11	CERAMIC CHIP	15PF	5%	50V	IC3502	8-759-583-47	IC UPC2933T-E1			
C3547	1-104-664-11	ELECT	47µF	20%	16V						
C3548	1-165-319-11	CERAMIC CHIP	0.1µF		50V						
C3549	1-104-664-11	ELECT	47µF	20%	16V		0011				
C3550	1-163-031-11	CERAMIC CHIP	0.01µF		50V		COIL				
			· IE-			13500	1-412-028-11	INDUCTOR CHIP	∄ 7⊔		
C3551	1-104-664-11	ELECT	47µF	20%	16V	L3500			4.7µH		
			47μΓ 0.01μF	20 /0		L3501	1-414-267-11	INDUCTOR	10µH		
C3552	1-163-031-11	CERAMIC CHIP	•		50V	L3502	1-414-267-11	INDUCTOR	10µH		
C3553	1-163-031-11	CERAMIC CHIP	0.01µF	_	50V	L3503	1-414-267-11	INDUCTOR	10µH		
C3554	1-104-664-11	ELECT	47µF	20%	16V	L3504	1-414-267-11	INDUCTOR	10µH		
C3555	1-104-664-11	ELECT	47µF	20%	16V	L3505	1-414-267-11	INDUCTOR	10µH		
C3556	1-165-319-11	CERAMIC CHIP	0.1µF		50V						
C3557	1-163-031-11	CERAMIC CHIP	0.01µF		50V						
C3558	1-104-664-11	ELECT	47μF	20%	16V						
00000	1-10 4- 004-11	LLLUI	÷ιμι	2070	101	I					

Note:

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REF.NO.	PART NO.	DESCRIPTION	R	EMARK		REF.NO.	PART NO.	DESCRIPTION		REMARK	
	TRANSISTOR	}				R3531	1-216-049-91	RES-CHIP	1K	5%	1/10W
	110 110 10 10 10 1	<u>-</u>				R3532	1-216-025-91	RES-CHIP	100	5%	1/10W
Q3500	8-729-216-22	TRANSISTOR 2SB70	09A-QRS-TX	(
Q3501	8-729-422-27	TRANSISTOR 2SD6				R3534	1-216-049-91	RES-CHIP	1K	5%	1/10W
Q3502	8-729-216-22	TRANSISTOR 2SB7				R3535	1-216-025-91	RES-CHIP	100	5%	1/10W
Q3503	8-729-422-27	TRANSISTOR 2SD6		-		R3544	1-216-049-91	RES-CHIP	1K	5%	1/10W
						R3545	1-216-043-91	RES-CHIP	560	5%	1/10W
Q3504	8-729-216-22	TRANSISTOR 2SB7	U9A-QRS-1X			R3547	1-216-067-00	RES-CHIP	5.6K	5%	1/10W
Q3505	8-729-422-27	TRANSISTOR 2SD6	01A-QRS-TX	(R3548	1-216-295-91	SHORT			
Q3506	8-729-422-27	TRANSISTOR 2SD6	01A-QRS-TX	(RES-CHIP	2 21/	E0/	4/40\\\
Q3510	8-729-216-22	TRANSISTOR 2SB70	09A-QRS-TX	(R3549	1-216-057-00		2.2K	5%	1/10W
Q3511	8-729-422-27	TRANSISTOR 2SD6				R3550	1-216-649-11	METAL CHIP	820	0.50%	1/10W
Q3512	8-729-422-27	TRANSISTOR 2SD6				R3551	1-208-776-11	METAL CHIP	560	0.50%	1/10W
QUUIZ	0 120 422 21	110 11010101010 2000	on ano m	`		R3552	1-208-764-11	METAL CHIP	180	0.50%	1/10W
Q3513	8-729-422-27	TRANSISTOR 2SD6				R3553	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
Q3514	8-729-216-22	TRANSISTOR 2SB70				R3554	1-216-047-91	RES-CHIP	820	5%	1/10W
Q3515	8-729-422-27	TRANSISTOR 2SD6	01A-QRS-TX	(R3555	1-216-075-00	RES-CHIP	12K	5%	1/10W
Q3516	8-729-422-27	TRANSISTOR 2SD6	01A-QRS-TX	(
Q3517	8-729-422-27	TRANSISTOR 2SD6	01A-QRS-TX	(R3556	1-216-085-00	RES-CHIP	33K	5%	1/10W
ασσ	0.10.11			•		R3557	1-216-049-91	RES-CHIP	1K	5%	1/10W
						R3558	1-216-017-91	RES-CHIP	47	5%	1/10W
	RESISTOR					R3559	1-216-295-91	SHORT			
						R3560	1-216-049-91	RES-CHIP	1K	5%	1/10W
R3500	1-216-296-91	SHORT									
R3501	1-216-296-91	SHORT				R3561	1-216-043-91	RES-CHIP	560	5%	1/10W
R3502	1-216-296-91	SHORT				R3563	1-216-295-91	SHORT			
R3503	1-216-017-91	RES-CHIP	47	5%	1/10W						
R3504	1-216-295-91	SHORT	••	-,-		R3564	1-216-295-91	SHORT			
110004	1 210 200 01	OHOITI				R3565	1-216-067-00	RES-CHIP	5.6K	5%	1/10W
Daene	1 216 205 01	CLIODT				R3566	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R3505	1-216-295-91	SHORT				R3567	1-216-043-91	RES-CHIP	560	5%	1/10W
R3506	1-216-295-91	SHORT				R3568	1-216-047-91	RES-CHIP	820	5%	1/10W
R3507	1-216-295-91	SHORT				110000	1 210 047 51	INEO OF III	020	0/0	1/1044
R3508	1-216-295-91	SHORT				Darco	1 016 057 00	DEC CHID	2 21/	E0/	1/10W
R3509	1-216-049-91	RES-CHIP	1K	5%	1/10W	R3569	1-216-057-00	RES-CHIP	2.2K	5%	
						R3570	1-216-085-00	RES-CHIP	33K	5%	1/10W
R3510	1-216-041-00	RES-CHIP	470	5%	1/10W	R3571	1-216-075-00	RES-CHIP	12K	5%	1/10W
R3511	1-216-041-00	RES-CHIP	470	5%	1/10W	R3572	1-216-049-91	RES-CHIP	1K	5%	1/10W
R3512	1-216-295-91	SHORT		0,0	1, 1011	R3573	1-216-017-91	RES-CHIP	47	5%	1/10W
R3514	1-216-025-91	RES-CHIP	100	5%	1/10W	R3588	1-216-043-91	RES-CHIP	560	5%	1/10W
R3515	1-216-055-00	RES-CHIP	1.8K	5%	1/10W						
R3516	1-216-055-00		1.8K	5%	1/10W		CRYSTAL				
R3517	1-216-025-91	RES-CHIP	100	5%	1/10W	VOEGO	4 707 000 44	VIDDATOD ODVOT	Λ Ι		
R3518	1-216-025-91	RES-CHIP	100	5%	1/10W	X3500	1-767-606-11	VIBRATOR, CRYSTA	٩L		
R3519	1-216-295-91	SHORT									
R3520	1-216-065-91		4.7K	5%	1/10W						
R3521	1-216-041-00	DEC'UND	470	5 0/:	1/10W						
				5%							
R3522	1-216-041-00		470	5%	1/10W						
R3523	1-216-049-91		1K	5%	1/10W						
R3524	1-216-089-91	RES-CHIP	47K	5%	1/10W						
R3525	1-216-057-00	RES-CHIP	2.2K	5%	1/10W						
R3526	1-216-105-91		220K	5%	1/10W						
R3527	1-216-033-00		220	5%	1/10W						
R3528	1-216-645-11	METAL CHIP	560	0.50%	1/10W						
110020	7 210 010 11		000	0.0070	.,						
R3529	1-216-641-11	METAL CHIP	390	0.50%	1/10W						
R3530	1-216-067-00	RES-CHIP	5.6K	5%	1/10W						
						ı					



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Note:

REF.NO.	PART NO.	DESCRIPTION		EMARK		REF.NO.	PART NO.	DESCRIPTION		REMARK	
NEF.NU.	FMILLINU.	DESCRIP HUN	к	LIVIARA		KEP.NU.	TRANSISTOR		·	LIVIARA	
						0700		_			
	^					Q700 Q701	8-729-423-33 8-729-423-33	TRANSISTOR 2SC3			
	A					Q/UI	0-129-423-33	TRAINSISTOR 2503	STIA-QRST	A	
*	A 4222 002 A	CA (VAR) MOUNTER					RESISTOR				
•	A-1332-063-A	CA (VAR) MOUNTED (KV-27FV16/29FV16/2		' \		R706	1-249-381-11	CARBON	1	5%	1/4W
*	A-1332-061-A	CA (VAR) MOUNTED		1		R707	1-249-383-11	CARBON	1.5	5%	1/4W
	X 1002 001 X	(KV-32FS12/32FS16 C				R703	1-247-807-31	CARBON	100	5%	1/4W
		(02.0.2/02.0.0	,			R708	1-247-807-31	CARBON	100	5%	1/4W
	4-382-854-11	SCREW (M3X10), P	, SW (+)			R709	1-247-807-31	CARBON	100	5%	1/4W
						R710	1-247-807-31	CARBON	100	5%	1/4W
	CADACITOD					R714	1-260-087-11	CARBON	100	5%	1/2W
	CAPACITOR					R702	1-247-815-91	CARBON	220	5%	1/4W
C701	1-104-664-11	ELECT	47µF	20%	25V	R716	1-260-123-11	CARBON	100K	5%	1/2W
C702	1-136-165-00	MYLAR	0.1µF	5%	50V	R701	1-249-429-11	CARBON	10K	5%	1/4W
C703	1-104-664-11	ELECT	47µF	20%	25V						
C704	1-107-651-11	ELECT	4.7µF	20%	250V	R705	1-249-429-11	CARBON	10K	5%	1/4W
C705	1-107-652-11	ELECT	10µF	20%	250V	R711	1-260-099-11	CARBON	1K	5%	1/2W
						R712	1-260-099-11	CARBON	1K	5%	1/2W
C707	1-162-114-00	CERAMIC	0.0047µF		2KV	R713	1-260-099-11	CARBON	1K	5%	1/2W
C708	1-136-165-00	MYLAR	0.1µF	5%	50V	R704	1-249-421-11	CARBON	2.2K	5%	1/4W
C709	1-126-934-11	ELECT	220µF	20%	16V			0.155011			
C710	1-126-964-11	ELECT	10µF	20%	50V	R720	1-249-421-11	CARBON	2.2K	5%	1/4W
						R721	1-249-421-11	CARBON	2.2K	5%	1/4W
						R700	1-247-863-91	CARBON	22K	5%	1/4W
	CONNECTOR	1				R715	1-260-132-11	CARBON	560K	5% 50/	1/2W
ON 1704 +	4 504 500 44	DI LIO CONNECTOR	0.00			R717	1-216-373-11	METAL OXIDE	2.2	5%	2W
CN701 *	1-564-506-11	PLUG, CONNECTOR	K 3P			R718	1-216-375-00	(KV-27FV16/29FV1		,	2W
CN702	1-695-915-11	TAB (CONTACT)	TOD 4D			K/18	1-216-375-00	METAL OXIDE (KV-32FS12/32FS1	3.3 CONLV)	5%	∠VV
CN704 CN706 *	1-784-281-11 1-564-509-11	HOUSING, CONNECTOR				R719	1-215-888-00	•	220	5%	2W
011700	1 004 000 11	1 LOO, CONNECTOR	(01			10110	1 210 000 00	WILLIAL OAIDL	220	0/0	ZVV
	DIODE						VARIABLE R	ESISTOR			
D701	8-719-901-83	DIODE 1SS83TD				RV701	1-2/11-656 11	RES, ADJ, METAL	FILM 110M		
D701 D702	8-719-901-83	DIODE 1883TD				KV/UI	1-241-030-11	RES, ADJ, WETAL	FILIVI I I UIVI		
D702											
D703		DIODE RGP10GPKG	323				7				
5701	0 7 10 002 10	DIODE NOI TOOL NO	<i>5</i> 20								
	<u>IC</u>										
IC701		IC LA6500-FA				*	A-1343-875-A	D (VAR) MOUNTED	PC BOARD		
IC702	8-759-562-43	IC TDA6108JF/N1B						(KV-27FV16/29FV16/2	9FV16C ONL	Y)	
						*	A-1343-874-A	D (VAR) MOUNTED			
								(KV-32FS12/32FS16	ONLY)		
	<u>JACK</u>										
J701	1-451-470-21	SOCKET, CRT					CAPACITOR				
						C801	1-126-960-11	ELECT	1µF	20%	50V
	COIL					C802	1-126-964-11		10μF	20%	50V
						C803	1-136-191-11		0.22µF	5%	63V
L701	1-408-613-31	INDUCTOR	68µH			C804	1-136-191-11		0.22µF	5%	63V
						1					

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REF.NO.	PART NO.	DESCRIPTION	RI	EMARK		REF.NO.	PART NO.	DESCRIPTION	RE	MARK	
C807	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V		TRANSISTOR	}			
C808	1-163-021-91	CERAMIC CHIP	0.01μF	10%	50V		ITTAITOIOTOI	<u>.</u>			
C809	1-110-501-11	CERAMIC CHIP	0.01µl 0.33µF	10%	16V	Q801	8-729-422-27	TRANSISTOR 2SD6	01A-QRS-TX		
C810	1-130-495-00	MYLAR	0.33µF 0.1µF	5%	50V	Q802	8-729-216-22	TRANSISTOR 2SB7	09A-QRS-TX		
						Q803	8-729-216-22	TRANSISTOR 2SB7	09A-QRS-TX		
C812	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V	Q804	8-729-216-22	TRANSISTOR 2SB7	09A-QRS-TX		
0044	4 400 004 04	OED AMIO OLUB	0.04 5	4007	501/	Q805	8-729-140-97				
C814	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V						
C815	1-129-718-00	FILM	0.022µF	5%	630V	Q806	8-729-422-27	TRANSISTOR 2SD6	01A-QRS-TX		
C816	1-102-244-00	CERAMIC	220PF	10%	500V	Q809	8-729-422-27	TRANSISTOR 2SD6			
C817	1-136-558-11	FILM	0.0039µF	5%	630V	Q810	8-729-043-95	TRANSISTOR 2SC3			
		(KV-27FV16/29FV16		NLY)		Q811	8-729-119-76	TRANSISTOR 2SA1			
C817	1-129-928-00	FILM	0.0027µF	10%	630V	Q812	8-729-119-76	TRANSISTOR 2SA1			
		(KV-32FS12/32FS16	ONLY)			QUIZ	0-729-119-70	TRANSISTOR ZOAT	אוטאיעונטוא		
C818	1-164-735-51	CERAMIC	0.0015µF	10%	500V		DEGISTOR				
		(KV-27FV16/29FV16	3/29FV16C O	NLY)			<u>RESISTOR</u>				
C818	1-164-625-11	CERAMIC	680PF	10%	500V	R801	1-216-089-91	RES-CHIP	47K	5%	1/10W
		(KV-32FS12/32FS16	ONLY)			R802	1-216-073-00	RES-CHIP	10K	5%	1/10W
C820	1-109-954-11	ELECT	0.47µF	20%	160V	R803	1-216-081-00	RES-CHIP	22K	5%	1/10W
C821	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V		1-216-073-00	RES-CHIP			
C823	1-130-967-00	FILM	0.0027µF	5%	50V	R804			10K	5%	1/10W
						R805	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
C824	1-104-760-11	CERAMIC CHIP	0.047µF	10%	50V	Door	4 040 004 00	DEC OUID	001/	F 0/	4/4014/
C825	1-137-150-11	MYLAR	0.01µF	5%	50V	R806	1-216-081-00	RES-CHIP	22K	5%	1/10W
C826	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	R807	1-216-061-00	RES-CHIP	3.3K	5%	1/10W
C862	1-126-964-11		10µF	20%	50V	R808	1-216-073-00	RES-CHIP	10K	5%	1/10W
0002	1 120 304 11	LLLOI	ιομι	2070	30 V	R809	1-216-081-00	RES-CHIP	22K	5%	1/10W
						R811	1-216-025-91	RES-CHIP	100	5%	1/10W
	CONNECTOR										
	CONNECTOR					R812	1-216-061-00	RES-CHIP	3.3K	5%	1/10W
CN800 *	1-564-510-11	PLUG, CONNECTOR	R 7P			R813	1-216-041-00	RES-CHIP	470	5%	1/10W
CN801 *	1-564-507-11	PLUG, CONNECTOR				R814	1-215-862-11	METAL OXIDE	68	5%	1W
CN802 *	1-508-784-21	PIN, CONNECTOR (1P				(KV-32FS12/32FS16	ONLY)		
011002	1 000 104 21	TIN, CONNECTOR	OWNVIT TOOTI	' '''		R815	1-215-862-11	METAL OXIDE	68	5%	1W
						R816	1-247-807-31	CARBON	100	5%	1/4W
	DIODE										
	DIODE					R817	1-216-091-00	RES-CHIP	56K	5%	1/10W
D801	8-719-109-89	DIODE MTZJ-T-77-5.	6C					(KV-27FV16/29FV16	3/29FV16C ON	NLY)	
D802	8-719-991-33	DIODE 1SS133T-77				R817	1-208-822-11	METAL CHIP	47K	0.50%	1/10W
D808	8-719-991-33	DIODE 1SS133T-77						(KV-32FS12/32FS16	ONLY)		
D809	8-719-110-41	DIODE MTZJ-T-77-1				R819	1-216-089-91	RES-CHIP	47K	5%	1/10W
D810	8-719-970-87					R820	1-216-683-11	METAL CHIP	22K	0.50%	1/10W
DOTO	0-119-910-01	DIODE ENASO-001F	1					(KV-27FV16/29FV16			
D044	0.740.070.07	DIODE EDAM OCTO	14			R820	1-208-818-11	•	33K	,	1/10W
D811		DIODE ERA38-06TP				11020	1 200 010 11	(KV-32FS12/32FS16		0.0070	1,1011
D812		DIODE ERB44-06TP						(117 021 012/021 010	ONLI		
D813		DIODE 1SS133T-77				R821	1-216-077-91	RES-CHIP	15K	5%	1/10W
D814	8-719-991-33	DIODE 1SS133T-77				11021	1-210-077-31	(KV-27FV16/29FV16			1/1000
						D004	1-216-061-00	RES-CHIP	3.3K	5%	1/10\\\
						R821	1-210-001-00			370	1/10W
	<u>IC</u>					Dooo	1 246 005 04	(KV-32FS12/32FS16	,	E 0/	1/10\\\
10						R822	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
IC801		IC NJM2904D				R823	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
IC802	8-759-659-67					R824	1-208-830-11	METAL CHIP	100K	0.50%	1/10W
IC803	8-759-659-67	IC NJM2903D									
						R825	1-208-830-11		100K	0.50%	1/10W
						R827	1-216-065-91		4.7K	5%	1/10W
	COIL					R828	1-216-085-00	RES-CHIP	33K	5%	1/10W
	<u>-</u>					R829	1-208-846-11	METAL CHIP	470K	0.50%	1/10W
L803	1-406-677-11	INDUCTOR	10mH		ļ	R830	1-216-295-91	SHORT			



The components identified by shading and mark \triangle are critical for safety. Replace only with part number specified.

Note:

REF.NO.	PART NO.	DESCRIPTION	REMA	RK		REF.NO.	PART NO.	DESCRIPTION	R	EMARK	
R831	1-216-049-91	RES-CHIP	1K 5%		1/10W	R863	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R832	1-216-067-00	RES-CHIP	5.6K 5%		1/10W	R864	1-216-033-00	RES-CHIP	220	5%	1/10W
		(KV-27FV16/29FV16			.,	R865	1-216-097-91	RES-CHIP	100K	5%	1/10W
R832	1-216-061-00	RES-CHIP	3.3K 5%		1/10W	R866	1-249-429-11	CARBON	10K	5%	1/4W
11002	1 210 001 00	(KV-32FS12/32FS16			,,,,,,,	R867	1-216-073-00	RES-CHIP	10K	5%	1/10W
R833	1-216-687-11	METAL CHIP	,	0%	1/10W	11001	1 210 070 00	INEO OF III	TOIL	3 /0	1/1011
11000	1-210-007-11	(KV-27FV16/29FV16			1/1000	R868	1-216-073-00	RES-CHIP	10K	5%	1/10W
R833	1-216-689-11	RES-CHIP	39K 5%		1/10W	R869	1-216-097-91	RES-CHIP	100K	5%	1/10W
11000	1 210 003 11	(KV-32FS12/32FS16			1/1000	R870	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
		(117 021 012/021 010	ONLI			R871	1-215-489-00	METAL	680K	1%	1/4W
R834	1-216-065-91	RES-CHIP	4.7K 5%		1/10W	R872	1-216-121-91	RES-CHIP	1M	5%	1/10W
R835	1-216-057-00	RES-CHIP	2.2K 5%		1/10W	NOIZ	1-210-121-31	INEO-OF III	IIVI	3/0	1/1044
R836	1-216-057-00	RES-CHIP	2.2K 5%		1/10W	R873	1-216-073-00	RES-CHIP	10K	5%	1/10W
R837	1-208-808-11	METAL CHIP		0%	1/10W	R874	1-216-037-00		330	5%	1/10W
R838	1-247-807-31	CARBON	100 5%		1/4W	R875	1-216-035-00		270	5%	1/10W
11000	1-247-007-31	OANDON	100 3/0		1/400	R890	1-216-097-91		100K	5%	1/10W
R839	1-216-025-91	RES-CHIP	100 5%		1/10W	11030	1-210-031-31	NLO-OI III	TOOK	J/0	1/1044
R840	1-216-023-91	RES-CHIP	68K 5%		1/10W						
NO4U	1-210-093-91	(KV-27FV16/29FV16			1/1000						
D044	1 200 002 11	,	,		1/10\\\		TRANSFORM	<u>IER</u>			
R841	1-208-802-11	METAL CHIP		0%	1/10W	T801	1-424-584-11	TRANSFORMER, D	√NIΔMIC FO	CHS	
D044	1 200 000 11	(KV-27FV16/29FV16	,		1/10\\\	1001	1-424-304-11	TIVAINOI OINVIER, D	TIVAIVIIO TO	000	
R841	1-208-806-11	METAL OXIDE		0%	1/10W						
D040	4 000 700 44	(KV-32FS12/32FS16	,	00/	4/40\4/		_				
R842	1-208-796-11	METAL CHIP	3.9K 0.5	0%	1/10W		^				
D04F	4 040 444 44	CADDON	400K m/		4/4/4/	$\Box \Box \prime$	4				
R845	1-249-441-11	CARBON	100K 5% 100K 5%		1/4W 1/4W						
R846	1-249-441-11	CARBON			1/4VV 1/4W						
R847	1-249-441-11	CARBON	100K 5%			*	A-1372-825-A	HA MOUNTED PC B	OARD		
R848	1-215-876-00	METAL OXIDE (KV-27FV16/29FV16	15K 5%		1W			(ALL EXCEPT KV-321			
R848	1-215-894-11	METAL OXIDE	2.2K 5%		2W			(0.2,02.0.01		
N0 4 0	1-213-094-11				ZVV						
		(KV-32FS12/32FS16	ONLY)				CAPACITOR				
R849	1-215-920-11	METAL OXIDE	3.3K 5%		3W		CAPACITOR				
11043	1-213-320-11	(KV-27FV16/29FV16			SVV	C4202	1-117-534-91	ELECT	1μF	20%	100V
R849	1-216-486-21	METAL OXIDE	8.2K 5%		3W	C4203	1-117-534-91	ELECT	1µF	20%	100V
NO49	1-210-400-21	(KV-32FS12/32FS16			SVV						
R850	1-216-486-21	METAL OXIDE	8.2K 5%		3W						
NCOOU	1-210-400-21	(KV-32FS12/32FS16			SVV		CONNECTOR				
D0E4	1-215-894-11	METAL OXIDE	2.2K 5%		2W		OOMINEOTON	•			
R851	1-210-094-11				ZVV	CN4200*	1-564-512-11	PLUG, CONNECTOR	₹9P		
D0E4	1 245 022 44	(KV-27FV16/29FV16	,		34/						
R851	1-215-922-11		6.8K 5%		3W						
		(KV-32FS12/32FS16	ONLT)				DIODE				
R852	1-215-922-11	METAL OXIDE	6.8K 5%		3W						
N002	1-213-922-11	(KV-32FS12/32FS16			SVV	D4217		DIODE RD9.1EW-T1			
R854	1-216-069-00	RES-CHIP	6.8K 5%		1/10W	D4218		DIODE RD9.1EW-T1			
K004	1-210-009-00	(KV-27FV16/29FV16			1/1000	D4219	8-719-108-12	DIODE RD9.1EW-T1			
R854	1-216-067-00	RES-CHIP	'		1/10W						
R004	1-210-007-00				1/1000						
DOFF	4 040 000 04	(KV-32FS12/32FS16	,		4/40\4/		JACK				
R855	1-216-089-91	RES-CHIP	47K 5%		1/10W	14004	4 === 004 44	TERMINAL BL 001/	•		
Doce	4 040 004 00	(KV-27FV16/29FV16	,		4/40/4/	J4221	1-770-361-11	TERMINAL BLOCK,	S		
R855	1-216-091-00	RES-CHIP	56K 5%		1/10W						
חפרד	4 000 040 44	(KV-32FS12/32FS16		00/	4/40/4						
R857	1-208-818-11	METAL CHIP		0%	1/10W		RESISTOR				
Doos	4 000 000 / :	(KV-32FS12/32FS16		001	4/40)4/	D 4000	4 040 405 44	CADDON	4 71/	F 0/	4 /4\4
R860	1-208-806-11				1/10W	R4206	1-249-425-11		4.7K	5% 5%	1/4W
R862	1-216-057-00	KE2-CHIP	2.2K 5%		1/10W	R4207	1-247-895-91	CARBON	470K	5%	1/4W

Note:

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Les composants identifies per un trame et une marque que par une piece portant le numero specifie.



50V

50V

50V 50V

1/10W

1/10W

1/10W

1/10W

1/10W

only wi	th part number	specified.		que par u	ne piece por	tant le numero s	pecifie.		$ H\rangle$	$X \mid$
REF.NO.	PART NO.	DESCRIPTION		REMARK		REF.NO.	PART NO.	DESCRIPTION	F	REMARK
R4208 R4209 R4210 R4211 R4212	1-247-895-91 1-249-425-11 1-249-419-11 1-249-421-11 1-249-427-11	CARBON CARBON	470K 4.7K 1.5K 2.2K 6.8K	5% 5% 5% 5% 5%	1/4W 1/4W 1/4W 1/4W 1/4W	R4001 R4002 R4003 R4004 R4005	RESISTOR 1-216-025-91 1-216-045-00 1-216-047-91 1-216-057-00 1-216-069-00	RES-CHIP RES-CHIP	100 680 820 2.2K 6.8K	5% 5% 5% 5% 5%
	<u>SWITCH</u>									
\$4217 \$4218 \$4219 \$4220	1-762-196-21 1-762-196-21 1-762-196-21 1-762-196-21	SWITCH, TACTILE				\$4001 \$4002 \$4003 \$4004	SWITCH 1-762-196-21 1-762-196-21 1-762-196-21 1-762-196-21	SWITCH, TACTILE SWITCH, TACTILE		
H	B					S4005 S4006	1-762-196-21 1-762-196-21	,		
*	A-1372-826-A	HB (VAR) MOUNTED (ALL EXCEPT KV-32F				K	<u> </u>			
C4050	CAPACITOR 1-104-665-11		100µF	20%	25V	*	A-1380-633-A A-1380-632-A	K (VAR) MOUNTED (KV-27FV16/29FV16/2 K (VAR) MOUNTED (KV-32FS12/32FS16 (9FV16C ONI PC BOARD	-Y)
CN4050*	1-564-520-11	PLUG, CONNECTOR	R 5P						,	
		,					CAPACITOR			
D4051	DIODE 8-719-057-09	DIODE LNJ801LPDJ	Α			C201 C202 C404 C405	1-163-034-00	CERAMIC CHIP CERAMIC CHIP	4.7μF 4.7μF 0.0033μF 0.033μF	
IC4050	IC 8-742-211-20	HYB IC SBX3071-7	1			C406 C407 C408 C409	1-164-222-11 1-164-222-11	CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP CERAMIC CHIP	0.0015μF 0.22μF 0.22μF 0.0015μF	
	DEGISTOR					0440	1-103-011-11	CERAINIC CHIP	0.0015µF	1070

1/4W

1/4W

5%

5%

47

1K



R4050

R4051

A-1372-817-A HX MOUNTED PC BOARD

CONNECTOR

RESISTOR

1-249-401-11 CARBON

1-249-417-11 CARBON

CN4001 1-564-518-11 PLUG, CONNECTOR 3P

10% 50V 25V 25V F 10% 50V C410 1-163-034-00 CERAMIC CHIP $0.033 \mu F$ 50V C411 1-164-182-11 CERAMIC CHIP $0.0033 \mu F$ 10% 50V C412 1-163-038-91 CERAMIC CHIP 0.1µF 25V C413 1-126-963-11 **ELECT** 4.7µF 20% 50V C414 1-126-963-11 ELECT 4.7µF 20% 50V C415 1-126-963-11 ELECT 4.7µF 20% 50V C416 1-126-963-11 ELECT 4.7µF 20% 50V C417 4.7µF 20% 1-126-963-11 ELECT 50V C418 1-163-038-91 CERAMIC CHIP 0.1µF 25V C419 1-164-346-11 CERAMIC CHIP 1µF 16V C422 1-126-963-11 ELECT 4.7µF 20% 50V C423 1-126-963-11 4.7µF 50V ELECT 20% C424 CERAMIC CHIP $0.47 \mu F$ 25V 1-164-005-11 (KV-27FV16/29FV16/29FV16C ONLY) C425 1-164-346-11 CERAMIC CHIP 1µF 16V (KV-27FV16/29FV16/29FV16C ONLY)



Noto:

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Note:

C428	REF.NO.	PART NO.	DESCRIPTION	REMARK		REF.NO.	PART NO.	DESCRIPTION		REMARK	
C27							CHIP CONDU	CTOR			
CA27	C426	1-126-960-11	ELECT	1µF 20%	50V	ID 400	1 016 005 01	CHODT			
1/28-98-11			(KV-27FV16/29FV16/2	29FV16C ONLY)							
C428	C427	1-126-968-11	ELECT	100µF 20%	50V						
1-126-968-11 1-12			(KV-27FV16/29FV16/2								
C429	C428	1-126-968-11	*	,	50V		1-216-295-91				
1-63-017-00 CERAMIC CHIP 0.047µF 10% 50V (KV27FV1629FV1629FV162 CONLY) 25V	0 120	1 120 000 11			001	JR422	1-216-295-91	SHORT			
C430	C420	1 162 017 00	•	,	E0\/						
C430	U429	1-103-017-00			30 V	JR423	1-216-295-91	SHORT			
168-222- 168-22- 168-2	0.400		•	,	0.51/	JR425	1-216-295-91				
C431	C430	1-164-222-11			25V						
CASI			(KV-27FV16/29FV16/2	29FV16C ONLY)							
1-163-038-91 CERAMIC CHIP 0.01											
C420	C431	1-163-038-91	CERAMIC CHIP	0.1µF	25V	JR420	1-210-293-91	SHUKT			
C420			(KV-27FV16/29FV16/2	29FV16C ONLY)		15.444		0.10.			
C433	C432	1-163-021-91	•	,	50V						
C438	0.02						1-216-295-91	SHORT			
C434	C433	1 16/ 2/6 11	•	,	16\/	JR474	1-216-295-91	SHORT			
C424	U 1 33	1-104-340-11			100	JR477	1-216-295-91	SHORT			
CASH	0404	4 400 000 04	•	,	051/	JR491	1-216-295-91	SHORT			
C440	C434	1-163-038-91		•	25V						
Coll			*	29FV16C ONLY)							
C441	C440	1-163-038-91	CERAMIC CHIP	0.1µF	25V						
C442							COIL				
1-216-295-91 SHORT C444 1-216-295-91 SHORT C446 1-126-933-11 ELECT 100 pF 20% 50V C47 1-126-961-11 ELECT 2.2 pF 20% 50V C431 8-729-422-27 TRANSISTOR 2SB001A-QRS-TX C450 1-126-963-11 ELECT 4.7 pF 20% 50V C431 8-729-422-27 TRANSISTOR 2SB001A-QRS-TX C451 1-126-963-11 ELECT 4.7 pF 20% 50V C432 8-729-216-22 TRANSISTOR 2SB709A-QRS-TX C451 1-126-963-11 ELECT 4.7 pF 20% 50V C432 8-729-216-22 TRANSISTOR 2SB709A-QRS-TX C451 1-126-963-11 ELECT 4.7 pF 20% 50V C432 8-729-216-22 TRANSISTOR 2SB709A-QRS-TX C451 1-126-963-11 ELECT 4.7 pF 20% 50V C432 8-729-216-22 TRANSISTOR 2SB709A-QRS-TX C451 1-163-031-01 CERAMIC CHIP 0.047 pF 25V (K.V-27FV16/29FV16/29FV16C ONLY) C468 1-163-031-01 ELECT 4.7 pF 20% 50V R404 1-216-025-91 RES-CHIP 100 5% 1/10W C468 1-126-963-11 ELECT 4.7 pF 20% 50V R405 1-216-025-91 RES-CHIP 100 5% 1/10W C469 1-126-963-11 ELECT 4.7 pF 20% 50V R405 1-216-025-91 RES-CHIP 100 5% 1/10W C475 C460 1-126-963-11 ELECT 4.7 pF 20% 50V R406 1-216-025-91 RES-CHIP 100 5% 1/10W C475 C	C441	1-126-968-11	ELECT	100µF 20%	50V	1.440	1 /1/ 271 11	INDLICTOR	/7.ı⊔		
C446	C442	1-216-295-91	SHORT	·		L410	1-414-211-11	INDUCTOR	4/µ11		
C446											
C447				100uF 20%	16\/						
C488				•			TRANSISTOR	₹			
C448	U 44 1	1-120-901-11	ELECT	2.2μΓ 20/0	30 V						
C450 1-126-963-11 ELECT 4.7µF 20% 50V C452 1-164-005-11 ELECT 4.7µF 20% 50V C455 1-164-005-11 ELECT 4.7µF 20% 50V C456 1-163-021-91 CERAMIC CHIP 0.47µF 20% 50V C457 1-163-034-00 CERAMIC CHIP 0.03µF 50V C458 1-126-963-11 ELECT 4.7µF 20% 50V C459 1-126-025-91 RES-CHIP 100 5% 1/10W C459 1-126-963-11 ELECT 4.7µF 20% 50V C459 1-126-025-91 RES-CHIP 100 5% 1/10W C459 1-126-963-11 ELECT 4.7µF 20% 50V C459 1-126-025-91 RES-CHIP 100 5% 1/10W C459 1-126-963-11 ELECT 4.7µF 20% 50V C459 1-126-025-91 RES-CHIP 100 5% 1/10W C459 1-126-963-11 ELECT 4.7µF 20% 50V C459 1-126-025-91 RES-CHIP 100 5% 1/10W R433 1-216-025-91 RES-CHIP 10K 5% 1/10W R433 1-216-025-91 RES-CHIP 10K 5% 1/10W R433 1-216-025-91 RES-CHIP 10K 5% 1/10W R433 1-216-025-91 RES-CHIP 200 5% 1/10W R433 1-216-025-91 RES-CHIP 200 5% 1/10W R436 1-216-025-91 RES-CHIP 200 5% 1/10W R437 1-216-025-91 RE	0440	4 400 004 44	FLEOT	0.0 5 000/	501/						
C451 1-126-963-11						Q431	8-729-422-27	TRANSISTOR 2SI	0601A-QRS-T	X	
C455				•		Q432	8-729-216-22	TRANSISTOR 2SE	3709A-QRS-T	Χ	
C456		1-126-963-11	ELECT	4.7μF 20%	50V	Q433	8-729-216-22	TRANSISTOR 2SE	3709A-QRS-T	Χ	
C456	C455	1-164-005-11	CERAMIC CHIP	0.47µF	25V						
C456			(KV-27FV16/29FV16/2	29FV16C ONLY)							
C457	C456	1-163-021-91	•	,	50V		DEGISTOR				
R403 1-216-025-91 RES-CHIP 100 5% 1/10W							RESISTOR				
C457 1-163-034-00 CERAMIC CHIP 0.033µF 50V R404 1-216-025-91 RES-CHIP 100 5% 1/10W R405 1-216-025-91 RES-CHIP 100 5% 1/10W R406 1-216-025-91 RES-CHIP 100 5% 1/10W R407 1-216-025-91 RES-CHIP 100 5% 1/10W R408 1-216-025-91 RES-CHIP 100 5% 1/10W R409 1-216-025-91 RES-CHIP 100 5% 1/10W R409 1-216-025-91 RES-CHIP 100 5% 1/10W R409 1-216-025-91 RES-CHIP 100 5% 1/10W R431 1-216-073-00 RES-CHIP 10K 5% 1/10W R432 1-216-073-00 RES-CHIP 10K 5% 1/10W R433 1-216-073-00 RES-CHIP 10K 5% 1/10W R436 1-216-033-00 RES-CHIP 220 5% 1/10W R437 1-216-033-00 RES-CHIP 220 5% 1/10W R438 1-216-033-00 RES-CHIP 220 5% 1/10W R441 1-216-05-91 RES-CHIP 220 5% 1/10W R442 1-216-033-00 RES-CHIP 220 5% 1/10W R443 1-216-105-91 RES-CHIP 220 5% 1/10W R443 1-216-105-91 RES-CHIP 220K 5% 1/10W R443 1-216-10			(*** = ** * * *** * * * * * * * * * * *	,		P/03	1-216-025-01	RES-CHIP	100	50/	1/10\//
C458 1-126-963-11 ELECT 4.7μF 20% 50V R407 1-216-025-91 RES-CHIP 100 5% 1/10W R408 1-216-025-91 RES-CHIP 100 5% 1/10W R409 1-216-025-91 RES-CHIP 100 5% 1/10W R409 1-216-025-91 RES-CHIP 100 5% 1/10W R431 1-216-025-91 RES-CHIP 100 5% 1/10W R431 1-216-025-91 RES-CHIP 100 5% 1/10W R431 1-216-025-91 RES-CHIP 100 5% 1/10W R432 1-216-073-00 RES-CHIP 10K 5% 1/10W R433 1-216-073-00 RES-CHIP 10K 5% 1/10W R433 1-216-073-00 RES-CHIP 10K 5% 1/10W R433 1-216-033-00 RES-CHIP 10K 5% 1/10W R436 1-216-033-00 RES-CHIP 220 5% 1/10W R437 1-216-033-00 RES-CHIP 220 5% 1/10W R437 1-216-033-00 RES-CHIP 220 5% 1/10W R438 1-216-033-00 RES-CHIP 220 5% 1/10W R438 1-216-033-00 RES-CHIP 220 5% 1/10W R438 1-216-033-00 RES-CHIP 220 5% 1/10W R436 1-216-033-00 RES-CHIP 220 5% 1/10W R442 1-216-033-00 RES-CHIP 220 5% 1/10W R443 1-216-105-91 RES-CHIP 220 5% 1/10W R443 1-216-105-	C457	1-163-03/1-00	CERAMIC CHIP	0.033uF	50\/						
C458 1-126-963-11 ELECT 4.7μF 20% 50V (KV-27FV16/29FV16/29FV16C ONLY) C460 1-126-963-11 ELECT 4.7μF 20% 50V (KV-27FV16/29FV16/29FV16C ONLY) C475 1-163-038-91 CERAMIC CHIP 0.1μF 25V R410 1-216-025-91 RES-CHIP 100 5% 1/10W R431 1-216-025-91 RES-CHIP 100 5% 1/10W R432 1-216-073-00 RES-CHIP 100 5% 1/10W R432 1-216-073-00 RES-CHIP 10K 5% 1/10W R433 1-216-073-00 RES-CHIP 10K 5% 1/10W R433 1-216-073-00 RES-CHIP 10K 5% 1/10W R432 1-216-033-00 RES-CHIP 10K 5% 1/10W R435 1-216-033-00 RES-CHIP 220 5% 1/10W R436 1-216-033-00 RES-CHIP 220 5% 1/10W R437 1-216-033-00 RES-CHIP 220 5% 1/10W R438 1-216-033-00 RES-CHIP 220 5% 1/10W R431 1-216-105-91 RES-CHIP 220K 5% 1/10W R441 1-216-105-91 RES-CHIP 220K 5% 1/10W R442 1-216-033-00 RES-CHIP 220K 5% 1/10W R443 1-216-105-91 RES-CHIP 220K 5% 1/10W R44	U 1 01	1-100-004-00			30 V						
C460 1-126-963-11 ELECT 4.7 μF 20% 50V (KV-27FV16/29FV16C ONLY)	0.450	4 400 000 44	<u>-</u>		50)/						
C460 1-126-963-11 ELECT 4.7μF 20% 50V (KV-27FV16/29FV16/29FV16C ONLY) R409 1-216-025-91 RES-CHIP 100 5% 1/10W C475 1-163-038-91 CERAMIC CHIP 0.1μF 25V R410 1-216-025-91 RES-CHIP 100 5% 1/10W R431 1-216-073-00 RES-CHIP 10K 5% 1/10W R432 1-216-073-00 RES-CHIP 10K 5% 1/10W R433 1-216-073-00 RES-CHIP 20C 5% 1/10W R433 1-216-033-00 RES-CHIP 20C 5% 1/10W R435 1-216-033-00 RES-CHIP 220 5% 1/10W R436 1-216-033-00 RES-CHIP 220 5% 1/10W R437 1-216-033-00 RES-CHIP 220 5% 1/10W R438 1-216-033-00 RES-CHIP 220 5% 1/10W R441 1-216-105-91 RES-CHIP 220K 5% 1/10W R442 1-216-033-00 RES-CHIP 220K 5% 1/10W R442 1-216-035-91 RES-CHIP 220K 5% 1/10W R443 1-216-105-91 RES-CHIP 220	C458	1-126-963-11		•	50V						
CA75			•	,		R408	1-216-025-91	RES-CHIP	100	5%	1/10W
C475 1-163-038-91 CERAMIC CHIP 0.1μF 25V R410 1-216-025-91 RES-CHIP 100 5% 1/10W R432 1-216-073-00 RES-CHIP 10K 5% 1/10W R433 1-216-073-00 RES-CHIP 10K 5% 1/10W R435 1-216-073-00 RES-CHIP 220 5% 1/10W R435 1-216-033-00 RES-CHIP 220 5% 1/10W R436 1-216-033-00 RES-CHIP 220 5% 1/10W R437 1-216-033-00 RES-CHIP 220 5% 1/10W R438 1-216-033-00 RES-CHIP 220 5% 1/10W R441 1-216-105-91 RES-CHIP 220 5% 1/10W R441 1-216-105-91 RES-CHIP 220 5% 1/10W R442 1-216-033-00 RES-CHIP 220 5% 1/10W R443 1-216-105-91 RES-CHIP 220 5% 1/10W R443	C460	1-126-963-11			50V						
C490 1-216-295-91 SHORT			(KV-27FV16/29FV16/2	29FV16C ONLY)		R409	1-216-025-91	RES-CHIP	100	5%	1/10W
C490 1-216-295-91 SHORT	C475	1-163-038-91	CERAMIC CHIP	0.1µF	25V	R410	1-216-025-91	RES-CHIP	100	5%	1/10W
R432	C490	1-216-295-91	SHORT	·			1-216-073-00				
R433 1-216-073-00 RES-CHIP 10K 5% 1/10W											
R434 1-216-065-91 RES-CHIP 4.7K 5% 1/10W											
R434 1-216-065-91 RES-CHIP 4.7K 5% 1/10W						N 4 33	1-210-073-00	NEO-CHIF	IUN	3/0	1/1044
CN402 * 1-564-506-11 PLUG, CONNECTOR 3P		CONNECTOR				D404	4 040 005 04	חבס סויים	4 71/	F 0/	4/4014
CN450 1-573-301-21 CONNECTOR, BOARD TO BOARD 20P R436 1-216-065-91 RES-CHIP 4.7K 5% 1/10W R437 1-216-033-00 RES-CHIP 220 5% 1/10W R438 1-216-033-00 RES-CHIP 220 5% 1/10W R438 1-216-033-00 RES-CHIP 220 5% 1/10W R438 1-216-105-91 RES-CHIP 220 5% 1/10W R438 1-216-105-91 RES-CHIP 220K 5% 1/10W R438 1-216-105-91 RES-CHIP 220K 5% 1/10W R441 1-216-105-91 RES-CHIP 220K 5% 1/10W R442 1-216-033-00 RES-CHIP 220K 5% 1/10W R442 1-216-033-00 RES-CHIP 220K 5% 1/10W R442 1-216-033-00 RES-CHIP 220K 5% 1/10W R443 1-216-105-91 RES-CHIP 220K 5	CNI400 *	1 564 506 44	DITIC CONNECTOR	DD.							
R437 1-216-033-00 RES-CHIP 220 5% 1/10W R438 1-216-033-00 RES-CHIP 220 5% 1/10W R438 1-216-033-00 RES-CHIP 220 5% 1/10W R438 RES-CHIP 220K 5% 1/10W R440 RES-CHIP 220K 5% 1/10W R441 RES-CHIP 220K 5% 1/10W R442 R441 RES-CHIP 220K 5% 1/10W R442 R443 RES-CHIP 220K 5% 1/10W R442 R443 RES-CHIP 220K 5% 1/10W RES-CHIP 220K 5% 1/10W R443 RES-CHIP 220K 8/10W RES											
R438 1-216-033-00 RES-CHIP 220 5% 1/10W 1/20 1/20W 1	UN450	1-573-301-21	CONNECTOR, BOARD	J TO BOARD 20P		R436	1-216-065-91		4.7K	5%	1/10W
R438 1-216-033-00 RES-CHIP 220 5% 1/10W 1/20 1/20W 1						R437	1-216-033-00	RES-CHIP	220	5%	1/10W
C403 8-759-658-19 IC NJM2198-TE2 R440 1-216-105-91 RES-CHIP 220K 5% 1/10W 1/20K						R438	1-216-033-00	RES-CHIP	220	5%	1/10W
IC403 8-759-658-19 IC NJM2198-TE2 R440 1-216-105-91 RES-CHIP 220K 5% 1/10W 1/20K		IC									
IC403 8-759-658-19 IC NJM2198-TE2 (KV-27FV16/29FV16/29FV16C ONLY) R441 1-216-105-91 RES-CHIP 220K 5% 1/10W IC404 8-759-658-01 IC NJW1130G-TE2 R442 1-216-105-91 RES-CHIP 220 5% 1/10W R443 1-216-105-91 RES-CHIP 220K 5% 1/10W		<u>. - •</u>				R440	1-216-105-01	RES-CHIP	220K	5%	1/10\/\
(KV-27FV16/29FV16/29FV16C ONLY) R442 1-216-033-00 RES-CHIP 220 5% 1/10W R442 8-759-658-01 IC NJW1130G-TE2 R443 1-216-105-91 RES-CHIP 220K 5% 1/10W	IC403	8-759-658-19	IC NJM2198-TE2								
IC404 8-759-658-01 IC NJW1130G-TE2 R443 1-216-105-91 RES-CHIP 220K 5% 1/10W				29FV16C ONLY)							
K445 1-210-100-91 RE3-OHP 220K 3% 1/10W	IC404	8-759-658-01	•	,							
R444 1-216-105-91 RES-CHIP 220K 5% 1/10W		3 . 00 000 01									
I and the state of						R444	1-216-105-91	RES-CHIP	220K	5%	1/10W

Note:

The components identified by shading and mark \triangle are critical for safety. Replace only with part number specified.



REF.NO.	PART NO.	DESCRIPTION	RI	EMARK		REF.NO.	PART NO.	DESCRIPTION	RE	MARK	
R445	1-216-105-91	RES-CHIP	220K	5%	1/10W	C045	1-164-161-11	CERAMIC CHIP	0.0022µF	10%	50V
R446	1-216-105-91	RES-CHIP	220K	5%	1/10W	C046	1-104-664-11	ELECT	47µF	20%	25V
R452	1-216-073-00	RES-CHIP	10K	5%	1/10W	C047	1-163-259-91	CERAMIC CHIP	220PF	5%	50V
		(KV-27FV16/29FV16				C048	1-163-259-91	CERAMIC CHIP	220PF	5%	50V
R455	1-216-025-91	RES-CHIP	100	5%	1/10W	C051	1-126-935-11	ELECT	470µF	20%	16V
R456	1-216-025-91	RES-CHIP	100	5%	1/10W	••••					
				0,0	,,,,,,,	C060	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
R477	1-216-105-91	RES-CHIP	220K	5%	1/10W	C062	1-126-959-11	ELECT	0.47µF	20%	50V
R478	1-216-105-91	RES-CHIP	220K	5%	1/10W	C063	1-137-194-81	MYLAR	0.47µF	5%	50V
				0,0	,,,,,,,	C064	1-163-017-00	CERAMIC CHIP	0.0047µF	10%	50V
						C070	1-163-009-11	CERAMIC CHIP	0.001µF	10%	50V
	_					0010	1 100 000 11	0210 11110 01111	0.00141	1070	001
$ \mathbf{N} $	Λ —					C071	1-163-009-11	CERAMIC CHIP	0.001µF	10%	50V
	$\boldsymbol{\wedge}$					C076	1-163-259-91	CERAMIC CHIP	220PF	5%	50V
						C077	1-163-259-91	CERAMIC CHIP	220PF	5%	50V
						C091	1-163-037-11	CERAMIC CHIP	0.022µF	10%	50V
*	A-1304-202-A	MA (VAR) MOUNTED	PC BOARD			C093	1-163-259-91	CERAMIC CHIP	220PF	5%	50V
		(KV-27FV16/29FV16/2		')		•	200 .	0		0,0	
*	A-1304-203-A	MA (VAR) MOUNTED	PC BOARD	,		C097	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
		(KV-32FS12 ONLY)				C099	1-126-960-11	ELECT	1µF	20%	50V
*	A-1304-196-A	MA (VAR) MOUNTED	PC BOARD			C151	1-126-960-11	ELECT	1µF	20%	50V
		(KV-32FS16 ONLY)				•	0 000	(ALL EXCEPT KV-32		_0,0	
		(/				C153	1-163-017-00	CERAMIC CHIP	0.0047µF	10%	50V
						0100	1 100 011 00	(ALL EXCEPT KV-32		1070	001
	CAPACITOR					C154	1-126-967-11	ELECT	47µF	20%	50V
	CAPACITOR					•.•.	0	(ALL EXCEPT KV-32		_0,0	
C003	1-126-959-11	ELECT	0.47µF	20%	50V			(//22/2//02/ / /// 02	0.12)		
C005	1-164-005-11	CERAMIC CHIP	0.47µF		25V	C155	1-126-964-11	ELECT	10µF	20%	50V
		(ALL EXCEPT KV-3	2FS12)			0100	1 120 001 11	(ALL EXCEPT KV-32		2070	001
C006	1-126-964-11	ELECT	10μF	20%	50V	C156	1-104-664-11	ELECT	47µF	20%	25V
C009	1-163-259-91	CERAMIC CHIP	220PF	5%	50V	0100	1 104 004 11	(ALL EXCEPT KV-32		2070	20 V
C010	1-163-035-00	CERAMIC CHIP	0.047µF		50V	C157	1-126-968-11	ELECT	100µF	20%	50V
			•			0101	1-120-300-11	(ALL EXCEPT KV-32		2070	30 V
C011	1-163-259-91	CERAMIC CHIP	220PF	5%	50V	C302	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C012	1-163-009-11	CERAMIC CHIP	0.001µF	10%	50V	0002	1 100 021 01	(KV-32FS12/32FS16		1070	00 V
C015	1-163-231-11	CERAMIC CHIP	15PF .	5%	50V	C303	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C016	1-163-231-11	CERAMIC CHIP	15PF	5%	50V	0000	1-103-021-31	(KV-32FS12/32FS16		1070	30 V
C017	1-126-960-11	ELECT	1μF	20%	50V			(117 021 012/021 010	OIVET)		
						C304	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C019	1-163-259-91	CERAMIC CHIP	220PF	5%	50V	0001	1 100 021 01	(KV-32FS12/32FS16		1070	001
C020	1-163-038-91	CERAMIC CHIP	0.1µF		25V	C305	1-126-933-11	ELECT	100µF	20%	16V
C021	1-163-259-91	CERAMIC CHIP	220PF	5%	50V	0000	1 120 000 11	(KV-32FS12/32FS16		2070	
C022	1-163-135-00	CERAMIC CHIP	560PF	5%	50V	C306	1-164-346-11	CERAMIC CHIP	1μF		16V
C027	1-163-009-11	CERAMIC CHIP	0.001µF	10%	50V	0000	1 101 010 11	(KV-27FV16/29FV16/		JI Y)	101
			·			C307	1-163-227-11	CERAMIC CHIP	10PF	0.50PF	50\/
C028	1-163-259-91	CERAMIC CHIP	220PF	5%	50V	0001	1 100 227 11	(KV-32FS12/32FS16		0.001 1	00 V
C032	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V	C308	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C033	1-163-259-91	CERAMIC CHIP	220PF	5%	50V	0000	1-103-021-31	(KV-32FS12/32FS16		1070	30 V
C034	1-163-037-11	CERAMIC CHIP	0.022µF	10%	50V			(1117-321 012/321 010	ONL!)		
C037	1-164-161-11	CERAMIC CHIP	0.0022µF	10%	50V	C309	1-126-933-11	ELECT	100µF	20%	16V
						0303	1-120-955-11	(KV-32FS12/32FS16		2070	10 V
C038	1-126-935-11	ELECT	470µF	20%	16V	C310	1-126-960-11	ELECT	1µF	20%	50V
C039	1-126-964-11	ELECT	10µF	20%	50V	C310		CERAMIC CHIP	1μΓ 180PF	20% 5%	50V
C040	1-163-229-11	CERAMIC CHIP	12PF	5%	50V	WII	1-163-123-00			J70	30 V
C041	1-163-229-11	CERAMIC CHIP	12PF	5%	50V	C212	1_16/ 005 14	(KV-32FS12/32FS16 CERAMIC CHIP	,		25V
C042	1-163-259-91	CERAMIC CHIP	220PF	5%	50V	C312	1-164-005-11		0.47µF	100/	
C043	1-163-009-11	CERAMIC CHIP	0.001µF	10%	50V	C313	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C044	1-163-009-11	CERAMIC CHIP	0.001µF	10%	50V	C314	1-163-231-11	CERAMIC CHIP	15PF	5%	50V
				/ •				(KV-32FS12/32FS16	ONLI)		



Noto:

The components identified by shading and mark \triangle are critical for safety. Replace only with part number specified.

Note:

REF.NO.	PART NO.	DESCRIPTION	R	EMARK		REF.NO.	PART NO.	DESCRIPTION	F	REMARK	
C315	1-104-664-11	ELECT	47µF	20%	25V	C360	1-126-959-11	ELECT	0.47µF	20%	50V
C316	1-163-243-11	CERAMIC CHIP	47PF	5%	50V	C361	1-163-038-91	CERAMIC CHIP	0.47μ1 0.1μF	2070	25V
					I					000/	
C317	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V	C362	1-104-664-11	ELECT	47µF	20%	25V
		(KV-32FS12/32FS16	S ONLY)			C363	1-163-038-91	CERAMIC CHIP	0.1µF		25V
C318	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V	C364	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
C319	1-126-767-11	ELECT	1000µF	20%	16V				•		
						C365	1-137-194-81	MYLAR	0.47µF	5%	50V
C320	1-164-005-11	CERAMIC CHIP	0.47µF		25V	C366	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C321	1-164-005-11	CERAMIC CHIP	0.47μF		25V	0000	1 100 021 01	(KV-32FS12/32FS16	•	1070	00 V
						0007	4 400 005 44	`	,	400/	E01/
C322	1-164-005-11	CERAMIC CHIP	0.47µF		25V	C367	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C323	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V	C368	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C324	1-163-231-11	CERAMIC CHIP	15PF	5%	50V			(KV-32FS12/32FS16	ONLY)		
		(KV-32FS12/32FS16	ONLY)			C369	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
								(KV-32FS12/32FS16	ONLY)		
C325	1-164-005-11	CERAMIC CHIP	0.47µF		25V			,	,		
C326	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V	C370	1-126-933-11	ELECT	100µF	20%	16V
		CERAMIC CHIP	•		25V	C371	1-163-243-11		47PF		50V
C328	1-164-004-11		0.1µF	10%				CERAMIC CHIP		5%	
C329	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V	C377	1-126-963-11	ELECT	4.7µF	20%	50V
C330	1-126-960-11	ELECT	1µF	20%	50V	C380	1-163-021-91	CERAMIC CHIP	0.01UF	10%	50V
								(KV-32FS12 ONLY)			
C331	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V	C381	1-163-021-91	CERAMIC CHIP	0.01UF	10%	50V
C332	1-163-010-11	CERAMIC CHIP	0.0012µF	10%	50V			(KV-32FS12 ONLY)			
0002		(KV-32FS12/32FS16		.070				(*** **********************************			
C334	1-163-003-11	CERAMIC CHIP	330PF	10%	50V	C382	1-163-021-91	CERAMIC CHIP	0.01UF	10%	50V
					I	U302	1-103-021-91		0.010	1070	30 V
C335	1-126-963-11	ELECT	4.7µF	20%	50V			(KV-32FS12 ONLY)			
C336	1-104-664-11	ELECT	47µF	20%	25V	C389	1-115-185-11	CERAMIC CHIP	0.033µF	10%	50V
		(KV-32FS12/32FS16	ONLY)					(KV-27FV16/29FV16	/29FV16C (ONLY)	
						C389	1-104-760-11	CERAMIC CHIP	0.047UF	10%	50V
C338	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V			(KV-32FS12/32FS16	ONLY)		
C339	1-126-960-11	ELECT	1μF	20%	50V	C390	1-163-231-11	CERAMIC CHIP	15PF [']	5%	50V
••••			· Fr.	_0,0		0000		(KV-32FS12/32FS16		3 70	•••
C340	1-126-933-11	ELECT	100µF	20%	16V	C391	1-126-933-11	ELECT	100µF	20%	16V
0040	1-120-333-11	-		2070	100	0031	1-120-355-11	-		2070	10 V
0044	4 400 000 44	(KV-32FS12/32FS16	,	m/	501/			(KV-32FS12/32FS16	ONLT)		
C341	1-163-233-11	CERAMIC CHIP	18PF	5%	50V	000=	4 400 004 04	0504440 0140		4007	=01/
C345	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V	C395	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
		(ALL EXCEPT KV-32	2FS12)			C396	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V
						C397	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V
C346	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V			(KV-32FS12/32FS16	ONLY)		
		(ALL EXCEPT KV-32	2FS12)			C398	1-126-964-11	ÈLECT	10µF	20%	50V
C347	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V	C451	1-164-346-11		1µF	_0,0	16V
0011	1 100 021 01	(ALL EXCEPT KV-32	•	1070	30 V	0-101	1 104 040 11	(ALL EXCEPT KV-32			10 V
0040	4 404 005 44		,		251/			(ALL EXCEPT INV-32	25312)		
C348	1-164-005-11	CERAMIC CHIP	0.47µF	000/	25V	0.450	4 404 040 44	0504440 0140			4017
C350	1-126-959-11	ELECT	0.47µF	20%	50V	C452	1-164-346-11		1µF		16V
		(KV-32FS12/32FS16	S ONLY)					(ALL EXCEPT KV-32	2FS12)		
C351	1-163-021-91	CERAMIC	0.01µF	10%	50V	C453	1-164-346-11	CERAMIC CHIP	1μF		16V
		(KV-32FS12/32FS16	ONLY)					(ALL EXCEPT KV-32	2FS12)		
		,	,			C454	1-164-346-11	CERAMIC CHIP	1µF		16V
C352	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V	•		(ALL EXCEPT KV-32			
C353	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V			(1122 27102) 1 111 0	_, 0,_,		
		ELECT	•								
C354	1-126-933-11	-	100µF	20%	16V						
0055	4 400 004 04	(KV-32FS12/32FS16	,	4007	50)/		CONNECTOR				
C355	1-163-021-91	CERAMIC CHIP	0.01µF	10%	50V	CNIOO4	4 764 004 44	DILIC COMMENTATO	110		
		(KV-32FS12/32FS16	,		l	CN001	1-764-334-11	,		NII NO	
C356	1-164-004-11	CERAMIC CHIP	0.1µF	10%	25V			(KV-27FV16/29FV16		JNLY)	
						CN001 *	1-564-511-11				
C357	1-104-664-11	ELECT	47µF	20%	25V			(KV-32FS12/32FS16			
C358	1-104-664-11	ELECT	47µF	20%	25V	CN002 *	1-560-124-00	PLUG, CONNECTOR	R (2.5MM) 4F)	
C359		CERAMIC CHIP	0.1µF		25V	CN003 *	1-564-512-11	PLUG, CONNECTOR	8 9P		
•			p.					*			

Note:

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REF.NO.	PART NO.	DESCRIPTION REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
CN004 *	1-564-512-11	PLUG, CONNECTOR 9P	IC301 ∧	8-752-098-86	IC CXA2154S	
CN005 *		PLUG, CONNECTOR 10P	10001 🖴	0 702 000 00	(ALL EXCEPT KV-32FS12)	
CN006 *		PLUG, CONNECTOR 10P	IC301 A	8-752-094-98	IC CXA2154S	
CN302 *		PLUG, CONNECTOR 4P	10001 🖽	0 702 00 1 00	(KV-32FS12 ONLY)	
CN304 *		PLUG, CONNECTOR 4P	IC302	8-759-655-75	IC TC90A49P	
011001	1 001 007 11	(ALL EXCEPT KV-32FS12)	10002	0 700 000 70	(KV-32FS12/32FS16 ONLY)	
		(NEE ENGEL I INV 321 G12)			(ITV 021 012/021 010 0IVL1)	
CN305	1-573-298-21	CONNECTOR, BOARD TO BOARD 20P				
		(ALL EXCEPT KV-32FS12)		CHIP CONDU	CTOR	
CN306 *	1-691-616-21	CONNECTOR, BOARD TO BOARD 15P		CHIE CONDO	CTOIL	
		(KV-27FV16/29FV16/29FV16C ONLY)	JR001	1-216-295-91	SHORT	
CN309 *	1-564-506-11	PLUG, CONNECTOR 3P	JR002	1-216-295-91	SHORT	
CN401 *		PLUG, CONNECTOR 2P	JR003	1-216-295-91	SHORT	
		(ALL EXCEPT KV-32FS12)	JR005	1-216-295-91	SHORT	
		,	JR006	1-216-295-91	SHORT	
	DIODE		JR007	1-216-295-91		
			JR008	1-216-295-91		
D001		DIODE UDZ-TE-17-5.1B	JR010	1-216-295-91		
D002		DIODE MTZJ-T-77-10B	JR011	1-216-295-91		
D003		DIODE MA111-TX	JR090	1-216-295-91	SHORT	
D004		DIODE UDZ-TE-17-5.1B				
D005	8-719-109-89	DIODE MTZJ-T-77-5.6C	JR100	1-216-295-91		
			JR101	1-216-295-91		
D006		DIODE UDZ-TE-17-9.1B	JR296	1-216-295-91		
D075		DIODE MA111-TX	JR297	1-216-295-91		
D301		DIODE MTZJ-T-77-5.1C	JR298	1-216-295-91	SHORT	
D303	8-719-991-33	DIODE 1SS133T-77				
		(ALL EXCEPT KV-32FS12)	JR350	1-216-295-91		
D304	8-719-981-99	DIODE MTZJ-T-77-3.3	JR378	1-216-295-91		
		(KV-27FV16/29FV16/29FV16C ONLY)	JR379	1-216-295-91		
B005	0 740 004 44	DIODE METAL TITLE 4.0	JR399	1-216-295-91		
D305		DIODE MTZJ-T-77-5.1C	JR401	1-216-295-91	SHORT	
D360	8-719-914-44	DIODE DAP202K-T-146				
				0011		
	FERRITE BEA	ND.		COIL		
	FERRIIE DE	<u>۹۷</u>	L002	1-414-273-11	INDUCTOR 100µH	
FB001	1-414-234-22	INDUCTOR CHIP 0µH	L003	1-414-273-11	INDUCTOR 100µH	
FB002	1-414-234-22	INDUCTOR CHIP 0µH	L040	1-408-963-11	INDUCTOR 2.7µH	
FB301	1-412-911-11	FERRITE 0µH	L150	1-414-267-11	INDUCTOR 10µH	
		(KV-32FS12/32FS16 ONLY)			(ALL EXCEPT KV-32FS12)	
			L151	1-414-273-11	INDUCTOR 100µH	
					(ALL EXCEPT KV-32FS12)	
	<u>FILTER</u>		L301	1-414-267-11	INDUCTOR 10µH	
			L302	1-414-271-11	INDUCTOR 47µH	
FL301	1-239-847-11	FILTER, LOW PASS	L303	1-414-856-11	INDUCTOR 10µH	
_		(KV-32FS12/32FS16 ONLY)			(KV-32FS12/32FS16 ONLY)	
FL302	1-239-847-11	FILTER, LOW PASS	L304	1-414-856-11	INDUCTOR 10µH	
FI 000		(KV-32FS12/32FS16 ONLY)			(KV-32FS12/32FS16 ONLY)	
FL303	1-239-847-11	FILTER, LOW PASS	L305	1-414-267-11	INDUCTOR 10µH	
		(KV-32FS12/32FS16 ONLY)				
			L308	1-414-273-11	INDUCTOR 100µH	
			L310	1-414-273-11	INDUCTOR 100µH	
	<u>IC</u>		L350	1-414-856-11	INDUCTOR 10µH	
IC001	8-759-680-52	IC M37280MK-111SP	1054	4 444 050 44	(KV-32FS12/32FS16 ONLY)	
IC001		IC MM1476AF(TP)	L351	1-414-856-11	INDUCTOR 10µH	
IC003		IC M24C16-MN6T			(KV-32FS12/32FS16 ONLY)	
		• • •				



Noto:

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Note:

REF.NO.	PART NO.	DESCRIPTION REMARK	REF.NO.	PART NO.	DESCRIPTION		REMARK	
L356	1-216-296-91	SHORT	Q375	8-729-422-27	TRANSISTOR 2SD	601A-QRS-T	Χ	
		(ALL EXCEPT KV-32FS12)	Q378	8-729-216-22	TRANSISTOR 2SB	709A-QRS-T	Χ	
L357	1-216-296-91	SHORT			(ALL EXCEPT KV-			
		(ALL EXCEPT KV-32FS12)	Q379	8-729-216-22	TRANSISTOR 2SB	,	Χ	
		(·== =/··· · · · · · · · · · · · · · · ·	40.0	0 . 20 2 . 0 22	(KV-27FV16/29FV1			
			Q380	8-729-216-22	•		,	
	TD A NOIOTOD		QUU	0-723-210-22	(KV-27FV16/29FV1			
	TRANSISTOR	<u>L</u>	Q387	8-729-216-22	•		,	
Q001	8-729-216-22	TRANSISTOR 2SB709A-QRS-TX	Q388		TRANSISTOR 2SB			
Q002	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX						
Q002	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	Q389	0-729-210-22	TRANSISTOR 2SB	109A-QK3-1	٨	
Q004		TRANSISTOR 2SB709A-QRS-TX						
Q004 Q006		TRANSISTOR 2SB709A-QRS-TX TRANSISTOR 2SB709A-QRS-TX						
QUUb	0-729-210-22	TRANSISTOR 25B/09A-QR5-TA		RESISTOR				
0000	0.700.400.07	TRANSISTOR CORCOLA ORGITY	Door	4 040 040 04	DEC OUID	500	5 0/	4/40\4/
Q082	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	R001	1-216-043-91		560	5%	1/10W
Q151	8-729-216-22	TRANSISTOR 2SB709A-QRS-TX	R002	1-216-041-00		470	5%	1/10W
		(ALL EXCEPT KV-32FS12)	R003	1-247-807-31		100	5%	1/4W
Q152	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	R004	1-216-061-00		3.3K	5%	1/10W
		(ALL EXCEPT KV-32FS12)	R005	1-216-295-91	SHORT			
Q301	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX						
		(KV-27FV16/29FV16/29FV16C ONLY)	R006	1-216-025-91	RES-CHIP	100	5%	1/10W
Q302	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	R007	1-216-025-91	RES-CHIP	100	5%	1/10W
		(KV-32FS12/32FS16 ONLY)	R008	1-216-049-91	RES-CHIP	1K	5%	1/10W
		,	R009	1-216-121-91		1M	5%	1/10W
Q303	8-729-216-22	TRANSISTOR 2SB709A-QRS-TX	R010	1-216-033-00		220	5%	1/10W
Q304		TRANSISTOR 2SD601A-QRS-TX	11010	1 210 000 00	1120 01111		0,0	17 1011
Q 001	0 120 122 21	(KV-27FV16/29FV16/29FV16C ONLY)	R011	1-216-033-00	RES-CHIP	220	5%	1/10W
Q305	8-729-216-22	TRANSISTOR 2SB709A-QRS-TX	R012	1-216-045-00		680	5%	1/10W
Q306	8-729-216-22	TRANSISTOR 2SB709A-QRS-TX	R012	1-249-417-11		1K	5%	1/4W
Q300	0-729-210-22				-			
0040	0.700.040.00	(KV-27FV16/29FV16/29FV16C ONLY)	R014	1-216-073-00		10K	5%	1/10W
Q310	8-729-216-22	TRANSISTOR 2SB709A-QRS-TX	R015	1-216-073-00	RES-CHIP	10K	5%	1/10W
		(KV-32FS12/32FS16 ONLY)	50/0					
			R016	1-216-041-00		470	5%	1/10W
Q349	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	R017	1-208-798-11	METAL CHIP	4.7K	0.50%	1/10W
		(KV-32FS12/32FS16 ONLY)	R018	1-247-815-91		220	5%	1/4W
Q350	8-729-216-22	TRANSISTOR 2SB709A-QRS-TX	R019	1-216-113-00		470K	5%	1/10W
		(KV-32FS12/32FS16 ONLY)	R020	1-216-033-00	RES-CHIP	220	5%	1/10W
Q351	8-729-216-22	TRANSISTOR 2SB709A-QRS-TX						
		(KV-32FS12/32FS16 ONLY)	R021	1-249-429-11	CARBON	10K	5%	1/4W
Q352	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	R022	1-247-815-91	CARBON	220	5%	1/4W
		(KV-32FS12/32FS16 ONLY)	R023	1-249-429-11	CARBON	10K	5%	1/4W
Q354	8-729-216-22	TRANSISTOR 2SB709A-QRS-TX	R024	1-247-815-91		220	5%	1/4W
		(KV-32FS12/32FS16 ONLY)	R025	1-249-426-11		5.6K	5%	1/4W
		(= = =				• • • • • • • • • • • • • • • • • • • •	-,-	.,
Q355	8-729-216-22	TRANSISTOR 2SB709A-QRS-TX	R026	1-249-426-11	CARBON	5.6K	5%	1/4W
4000	0 720 210 22	(KV-32FS12/32FS16 ONLY)	R027	1-249-426-11		5.6K	5%	1/4W
Q356	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	R028	1-216-049-91		1K	5%	1/10W
	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX				4.7K		1/10W
Q358	0-129-422-21	•	R029	1-216-065-91			5%	
0050	0.700.040.00	(KV-32FS12/32FS16 ONLY)	R030	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
Q359	0-729-210-22	TRANSISTOR 2SB709A-QRS-TX	Door	4 040 055 44	METAL OWNE	0.0	F 0/	4/ A J
		(KV-32FS12/32FS16 ONLY)	R031	1-216-355-11		3.3	5%	1W
Q365	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	R032	1-216-033-00		220	5%	1/10W
			R033	1-216-033-00		220	5%	1/10W
Q369	8-729-216-22	TRANSISTOR 2SB709A-QRS-TX	R034	1-216-033-00	RES-CHIP	220	5%	1/10W
		(KV-32FS12/32FS16 ONLY)	R035	1-216-033-00	RES-CHIP	220	5%	1/10W
Q368	8-729-422-27	TRANSISTOR 2SD601A-QRS-TX	R036	1-216-049-91	RES-CHIP	1K	5%	1/10W
Q370	8-729-216-22	TRANSISTOR 2SB709A-QRS-TX	R037	1-247-815-91	CARBON	220	5%	1/4W
		(KV-32FS12/32FS16 ONLY)	R038	1-216-049-91		1K	5%	1/10W
		,			- *			

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REF.NO.	PART NO.	DESCRIPTION	RE	MARK		REF.NO.	PART NO.	DESCRIPTION	REMARK	,
R039	1-216-045-00	RES-CHIP	680	5%	1/10W	R155	1-216-043-91	RES-CHIP 5	560 5%	1/10W
R040	1-247-815-91	CARBON	220	5%	1/4W			(ALL EXCEPT KV-32FS		
R041	1-216-045-00	RES-CHIP	680	5%	1/10W	R156	1-216-085-00	1	312) 33K 5%	1/10W
R042	1-216-071-00	RES-CHIP	8.2K	5%	1/10W	1(150	1-2 10-003-00	(ALL EXCEPT KV-32FS		1/1000
						D457	4 040 004 00	`	,	4/40/4/
R043	1-249-417-11	CARBON	1K	5%	1/4W	R157	1-216-081-00	RES-CHIP 2 (ALL EXCEPT KV-32FS	22K 5% S12)	1/10W
R044	1-216-033-00	RES-CHIP	220	5%	1/10W	R158	1-216-025-91	1	100 5%	1/10W
R045	1-216-055-00	RES-CHIP	4.7K	5%	1/10VV 1/10W	1(100	1-210-025-91	(ALL EXCEPT KV-32FS		1/1000
		RES-CHIP				D450	4 046 005 04	1	,	4/40/4/
R046	1-216-033-00		220	5%	1/10W	R159	1-216-025-91		100 5%	1/10W
R047	1-216-065-91	RES-CHIP	4.7K	5%	1/10W			(ALL EXCEPT KV-32FS	512)	
R048	1-216-025-91	RES-CHIP	100	5%	1/10W					
		(ALL EXCEPT KV-32	2FS12)			R251	1-216-065-91		1.7K 5%	1/10W
						R253	1-216-049-91		IK 5%	1/10W
R050	1-216-033-00	RES-CHIP	220	5%	1/10W	R256	1-216-073-00	RES-CHIP 1	10K 5%	1/10W
R051	1-216-033-00	RES-CHIP	220	5%	1/10W	R257	1-216-049-91	RES-CHIP 1	IK 5%	1/10W
R052	1-249-417-11	CARBON	1K	5%	1/4W	R258	1-216-065-91	RES-CHIP 4	1.7K 5%	1/10W
R054	1-216-065-91	RES-CHIP	4.7K	5%	1/10W					
R055	1-216-065-91	RES-CHIP	4.7K	5%	1/10W	R259	1-249-429-11	CARBON 1	OK 5%	1/4VV
11000	1 210 000 01	1120 01111		070	,,,,,,,	R260	1-247-815-91		220 5%	1/4VV
R056	1-208-798-11	METAL CHIP	4.7K	0.50%	1/10W	R261	1-216-113-00		170K 5%	1/10W
	1-216-065-91	RES-CHIP	4.7K 4.7K	5%	1/10VV 1/10W	R262			100 5%	1/4W
R057							1-247-807-31			
R058	1-216-065-91	RES-CHIP	4.7K	5%	1/10W	R263	1-216-025-91	RES-CHIP 1	100 5%	1/10W
R060	1-247-815-91	CARBON	220	5%	1/4W					
R061	1-216-033-00	RES-CHIP	220	5%	1/10W	R264	1-216-081-00		22K 5%	1/10W
								(ALL EXCEPT KV-32FS	S12)	
R064	1-216-295-91	SHORT				R266	1-216-081-00	RES-CHIP 2	22K 5%	1/10W
R069	1-247-815-91	CARBON	220	5%	1/4VV			(ALL EXCEPT KV-32FS	S12)	
		(ALL EXCEPT KV-32	2FS12)			R267	1-216-049-91	RES-CHIP 1	IK 5%	1/10W
R070	1-216-065-91	RES-CHIP	4.7K	5%	1/10W	R268	1-216-045-00	RES-CHIP 6	580 5%	1/10W
R071	1-216-065-91	RES-CHIP	4.7K	5%	1/10W	R269	1-216-049-91		IK 5%	1/10W
R073	1-249-425-11	CARBON	4.7K	5%	1/4W					
		0,1120.1		•		R270	1-216-081-00	RES-CHIP 2	22K 5%	1/10W
R074	1-216-065-91	RES-CHIP	4.7K	5%	1/10W	11270	1 210 001 00	(ALL EXCEPT KV-32FS		171011
R077	1-216-097-91	RES-CHIP	100K	5%	1/10W	R271	1-216-081-00	`	22K 5%	1/10W
R085	1-216-065-91	RES-CHIP	4.7K	5%	1/10VV 1/10W	1121 1	1-2 10-00 1-00	(ALL EXCEPT KV-32FS		1/1000
1,000	1-210-000-91	(KV-27FV16/29FV16			171000	R272	1-216-081-00	1	22K 5%	1/10W
D000	4 040 045 00	1		,	4/40\4/	RZIZ	1-210-001-00			1/1000
R086	1-216-045-00	RES-CHIP	680	5%	1/10W	D070	4 0 4 0 0 7 0 0 0	(ALL EXCEPT KV-32FS	,	4/40/4/
R087	1-216-045-00	RES-CHIP	680	5%	1/10W	R273	1-216-073-00		IOK 5%	1/10W
						R274	1-216-295-91	SHORT		
R088	1-216-045-00	RES-CHIP	680	5%	1/10W					
R089	1-216-033-00	RES-CHIP	220	5%	1/10W	R275	1-216-081-00		22K 5%	1/10W
		(KV-27FV16/29FV16	3/29FV16C O	NLY)				(KV-32FS12/32FS16 OI	,	
R091	1-216-073-00	RES-CHIP	10K	5%	1/10W	R276	1-216-085-00	RES-CHIP 3	33K 5%	1/10W
R092	1-208-798-11	METAL CHIP	4.7K	0.50%	1/10W	R277	1-216-129-00	RES-CHIP 2	2.2M 5%	1/10W
R093	1-216-065-91	RES-CHIP	4.7K	5%	1/10W			(KV-27FV16/29FV16/29	FV16C ONLY)	
						R277	1-216-133-00	RES-CHIP 3	3.3M 5%	1/10W
R094	1-216-065-91	RES-CHIP	4.7K	5%	1/10W			(KV-32FS12/32FS16 OI	NI Y)	
R095	1-216-065-91	RES-CHIP	4.7K	5%	1/10W	R278	1-216-295-91	SHORT	,	
R096	1-216-065-91	RES-CHIP	4.7K	5%	1/10W	11270	1 210 200 01	OFFICIAL		
	1-249-414-11					R279	1 247 007 21	CADDON 1	100 5%	1//\\\/
R097 R099	1-249-414-11	CARBON RES-CHIP	560 47K	5% 5%	1/4W 1/10W	R279 R280	1-247-807-31 1-216-069-00		100 5% 3.8K 5%	1/4VV 1/10VV
KU99	1-210-009-91	KES-CHIP	4/N	3%	1/1000					
D/50	1 010 050 05	DE0 01115	4.517	FC.	4/40/4/	R281	1-208-798-11		1.7K 0.50%	
R150	1-216-053-00	RES-CHIP	1.5K	5%	1/10W	R282	1-208-790-11		2.2K 0.50%	
		(ALL EXCEPT KV-32	,			R283	1-216-689-11		39K 5%	1/10W
R151	1-216-025-91	RES-CHIP	100	5%	1/10W	R284	1-216-049-91		IK 5%	1/10W
		(ALL EXCEPT KV-32	2FS12)					(KV-27FV16/29FV16/29	FV16C ONLY)	
R154	1-216-043-91	RES-CHIP	560	5%	1/10W	R285	1-216-049-91	RES-CHIP 1	IK 5%	1/10W
		(ALL EXCEPT KV-32	2FS12)					(KV-27FV16/29FV16/29	FV16C ONLY)	



Noto:

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Note:

REF.NO.	PART NO.	DESCRIPTION	R	EMARK		REF.NO.	PART NO.	DESCRIPTION	R	EMARK	
R286	1-216-089-91	RES-CHIP	47K	5%	1/10W	R326	1-208-806-11	METAL CHIP	10K	0.50%	1/10W
		(KV-27FV16/29FV16/2	29FV16C O	NLY)		R327	1-216-025-91	RES-CHIP	100	5%	1/10W
R287	1-216-097-91	RES-CHIP	100K	5%	1/10W	R328	1-216-025-91	RES-CHIP	100	5%	1/10W
		(KV-27FV16/29FV16/2			.,			(KV-32FS12/32FS16		-,-	
R288	1-216-041-00	RES-CHIP	470	5%	1/10W	R329	1-216-025-91	RES-CHIP	100	5%	1/10W
11200	1 210 011 00	(KV-27FV16/29FV16/2			1/1011	R331	1-216-049-91	RES-CHIP	1K	5%	1/10W
R289	1-216-049-91	RES-CHIP	1K	5%	1/10W	11001	1 210 010 01	(KV-32FS12/32FS16		0/0	1/1011
11200	1-210-0-3-31	(KV-27FV16/29FV16/2			1/ 1000			(117 021 012/021 010	ONLI		
R290	1-216-043-91	RES-CHIP	560	5%	1/10W	R332	1-216-022-00	RES-CHIP	75	5%	1/10W
11230	1-210-045-31	(KV-27FV16/29FV16/2			1/ 1000	R333	1-216-067-00	RES-CHIP	5.6K	5%	1/10W
		(KV-21FV10/29FV10/2	291 1 100 0	INL I)		11,000	1-2 10-007-00	(KV-32FS12/32FS16		J/0	1/1044
R291	1-216-053-00	RES-CHIP	1.5K	5%	1/10W	R334	1-216-025-91	RES-CHIP	100	5%	1/10W
NZ91	1-210-055-00				1/1000	NJO 1	1-210-025-91	(KV-32FS12/32FS16		3/0	1/1044
D000	4 040 005 04	(KV-27FV16/29FV16/2		,	4/40\4/	חממר	4 040 057 00	RES-CHIP	,	F 0/	4/40\4
R298	1-216-065-91	RES-CHIP	4.7K	5% NIL XX	1/10W	R335	1-216-057-00		2.2K	5%	1/10W
D000	4 040 000 00	(KV-27FV16/29FV16/2		,	4/40/4/	R336	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R299	1-216-033-00	RES-CHIP	220	5%	1/10W	D007	4 040 057 00	DEC OUID	0.01/	5 0/	4/4014/
Booo		(KV-27FV16/29FV16/2	29FV16C O	NLY)		R337	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
R300	1-216-295-91	SHORT				R338	1-216-073-00	RES-CHIP	10K	5%	1/10W
		(KV-32FS12/32FS16)				R339	1-216-091-00	RES-CHIP	56K	5%	1/10W
R301	1-216-022-00	RES-CHIP	75	5%	1/10W			(KV-32FS12/32FS16	,		
						R340	1-216-025-91	RES-CHIP	100	5%	1/10W
R303	1-216-073-00	RES-CHIP	10K	5%	1/10W	R341	1-216-089-91	RES-CHIP	47K	5%	1/10W
R304	1-247-807-31	CARBON	100	5%	1/ 4 W						
R305	1-216-295-91	SHORT				R342	1-216-049-91	RES-CHIP	1K	5%	1/10W
		(KV-32FS12/32FS16)	ONLY)			R343	1-216-097-91	RES-CHIP	100K	5%	1/10W
R306	1-216-025-91	RES-CHIP	100	5%	1/10W	R344	1-216-295-91	SHORT			
R307	1-216-071-00	RES-CHIP	8.2K	5%	1/10W	R345	1-216-097-91	RES-CHIP	100K	5%	1/10W
		(KV-27FV16/29FV16/2	29FV16C O	NLY)		R346	1-216-097-91	RES-CHIP	100K	5%	1/10W
R308	1-216-022-00	RES-CHIP	75	5%	1/10W	R347	1-216-025-91	RES-CHIP	100	5%	1/10W
R309	1-216-022-00	RES-CHIP	75	5%	1/10W						
R310	1-249-417-11	CARBON	1K	5%	1/4W	R348	1-216-022-00	RES-CHIP	75	5%	1/10W
R311	1-216-025-91	RES-CHIP	100	5%	1/10W	11010	1 210 022 00	(KV-27FV16/29FV16			1/1011
11011	1 210 020 01	(KV-32FS12/32FS16		070	1/1011	R349	1-216-025-91	RES-CHIP	100	5%	1/10W
R312	1-249-417-11	CARBON	1K	5%	1/4W	R350	1-216-022-00	RES-CHIP	75	5%	1/10W
11012	1-2-311-11	OARDON	ш	3/0	1/777	11000	1-210-022-00	(KV-27FV16/29FV16			1/1044
R313	1-216-049-91	RES-CHIP	1K	5%	1/10W	R351	1-216-041-00	RES-CHIP	470	5%	1/10W
R314	1-216-081-00		22K	5%	1/10W	11001	1-210-0-1-00	(KV-32FS12/32FS16		3/0	1/1044
N314	1-210-001-00	(ALL EXCEPT KV-32I		3/0	1/1000	R352	1-247-807-31		100	5%	1/4W
DOLE	1 246 022 00	•		E0/	1/10/1/	NOOZ	1-241-001-31	(KV-32FS12/32FS16		370	1/4/1/
R315	1-216-022-00		75 5.6V	5% 59/	1/10W			(NV-32F312/32F310	ONLT)		
R316	1-216-067-00		5.6K	5%	1/10W	חמרם	4 047 007 04	CADDON	400	F 0/	4/4/4/
D047	1 0 17 007 01	(KV-32FS12/32FS16)	,	5 0/	4/04/	R353	1-247-807-31		100	5%	1/4W
R317	1-247-807-31		100	5%	1/4W	D054		(KV-32FS12/32FS16	,	= 0.4	4/4014/
		(KV-32FS12/32FS16	ONLY)			R354	1-216-025-91		100	5%	1/10W
								(KV-32FS12/32FS16	,		
R318	1-216-091-00		56K	5%	1/10W	R355	1-216-053-00	RES-CHIP	1.5K	5%	1/10W
		(KV-32FS12/32FS16)	ONLY)					(KV-32FS12/32FS16	,		
R319	1-216-081-00	RES-CHIP	22K	5%	1/10W	R356	1-216-025-91	RES-CHIP	100	5%	1/10W
		(KV-32FS12/32FS16)	ONLY)			R357	1-216-022-00	RES-CHIP	75	5%	1/10W
R320	1-216-025-91	RES-CHIP	100	5%	1/10W						
		(KV-32FS12/32FS16	ONLY)			R358	1-216-093-91	RES-CHIP	68K	5%	1/10W
R321	1-216-043-91	RES-CHIP	560	5%	1/10W	R359	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
		(KV-32FS12/32FS16)	ONLY)					(KV-32FS12/32FS16	ONLY)		
R322	1-216-025-91		100	5%	1/10W	R360	1-216-093-91	•	68K	5%	1/10W
						R361	1-216-022-00		75	5%	1/10W
R323	1-216-025-91	RES-CHIP	100	5%	1/10W	R362	1-216-035-00	RES-CHIP	270	5%	1/10W
R323 R324	1-216-025-91 1-216-065-91		100 4.7K	5% 5%	1/10W 1/10W	R362 R363	1-216-035-00 1-216-039-00		270 390	5% 5%	1/10W 1/10W

Note:

The components identified by shading and mark \triangle are critical for safety. Replace only with part number specified.



REF.NO.	PART NO.	DESCRIPTION	REMARK		REF.NO.	PART NO.	DESCRIPTION	RE	MARK	
R364	1-216-025-91	RES-CHIP 100	5%	1/10W	R398	1-216-109-00	RES-CHIP	330K	5%	1/10W
		(KV-32FS12/32FS16 ONLY)					(KV-32FS12/32FS16	,		
R365	1-216-025-91	RES-CHIP 100	5%	1/10W	R399	1-216-109-00	RES-CHIP	330K	5%	1/10W
Dace	1 216 052 00	(KV-32FS12/32FS16 ONLY) RES-CHIP 1.5K	E 0/	1/10/1/	D200	1 216 600 11	(KV-27FV16/29FV16		,	1/10\\
R366	1-216-053-00	RES-CHIP 1.5K (KV-32FS12/32FS16 ONLY)	5%	1/10W	R399	1-216-689-11	RES-CHIP (KV-32FS12/32FS16	39K : ∩NL ∨\	5%	1/10W
R367	1-216-057-00	RES-CHIP 2.2K	5%	1/10W	R434	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
	. =	(KV-32FS12/32FS16 ONLY)	-/			. =	(ALL EXCEPT KV-32		-,-	
R368	1-216-043-91	RES-CHIP 560	5%	1/10W	R435	1-216-065-91	RES-CHIP	4.7K	5%	1/10W
		(KV-32FS12/32FS16 ONLY)					(ALL EXCEPT KV-32	2FS12)		
R369	1-216-033-00	RES-CHIP 220	5%	1/10W						
11003	1-210-000-00	(KV-32FS12/32FS16 ONLY)		1/1000		TUNER				
R370	1-249-429-11	· ·	5%	1/4W		IUNEK				
R372	1-216-043-91	RES-CHIP 560	5%	1/10W	TU150 △	8-598-501-00	TUNER, FSS BTF-F/	A402		
		(KV-32FS12/32FS16 ONLY)					(ALL EXCEPT KV-32	2FS12)		
R373	1-216-025-91	RES-CHIP 100	5%	1/10W						
D074	4 040 005 04	(KV-32FS12/32FS16 ONLY)	50 /	4/40\4/		ADVATA				
R374	1-216-025-91		5%	1/10W		CRYSTAL				
		(KV-32FS12/32FS16 ONLY)			X001	1-767-487-11	VIBRATOR, CRYSTA	AL		
R375	1-216-053-00	RES-CHIP 1.5K	5%	1/10W	X301	1-567-505-11	OSCILLATOR, CRYS	STAL		
	. =	(KV-32FS12/32FS16 ONLY)	-/							
R376	1-216-022-00		5%	1/10W		,				
D0==		DEC 0111D 0.017	-	4/40/4/						
R377	1-216-057-00	RES-CHIP 2.2K	5%	1/10W						
R378	1-216-295-91	(KV-32FS12/32FS16 ONLY) SHORT				_				
1/3/0	1-210-233-31	(KV-32FS12/32FS16 ONLY)								
R379	1-216-049-91	RES-CHIP 1K	5%	1/10W	*	A-1190-367-A	P MOUNTED PC BO			
		(KV-32FS12/32FS16 ONLY)					(ALL EXCEPT KV-32F	·S12)		
R380	1-216-295-91	SHORT								
K300	1-210-290-91	(KV-27FV16/29FV16/29FV16	SC ONLY)			CAPACITOR				
R381	1-216-069-00	RES-CHIP 6.8K	5%	1/10W	00004		OEDAMIO OLUD	0.04 5		50)/
	. =	(KV-27FV16/29FV16/29FV16			C3301	1-163-031-11	CERAMIC CHIP	0.01µF		50V
R382	1-216-295-91	SHORT	,		C3302 C3303	1-163-031-11 1-104-664-11	CERAMIC CHIP ELECT	0.01μF 47μF	20%	50V 16V
R383	1-216-295-91	SHORT			C3304	1-163-031-11	-	47μΓ 0.01μF	20/0	50V
R384	1-216-295-91	SHORT			C3305		CERAMIC CHIP	0.01μF		50V
D007	4 040 005 04	DEO OLUB	5 0/	4/40\4/						
R387	1-216-025-91	RES-CHIP 100	5%	1/10W	C3306	1-163-038-91	CERAMIC CHIP	0.1µF		25V
R386	1-216-047-91	RES-CHIP 820	5%	1/10W	C3308	1-164-005-11	CERAMIC CHIP	0.47µF		25V
11000	1-210-0-11-31	(KV-32FS12/32FS16 ONLY)	3/0	1/1044	C3309	1-163-034-00	CERAMIC CHIP	0.033µF		50V
R388	1-216-025-91	RES-CHIP 100	5%	1/10W	C3310	1-164-222-11	CERAMIC CHIP	0.22µF		25V
R389	1-216-049-91	RES-CHIP 1K	5%	1/10W	C3311	1-163-233-11	CERAMIC CHIP	18PF	5%	50V
		(KV-32FS12/32FS16 ONLY)			C3314	1-163-031-11	CERAMIC CHIP	0.01µF		50V
R392	1-216-067-00		5%	1/10W	C3314	1-163-031-11	CERAMIC CHIP	0.01µF		50V
		(KV-32FS12/32FS16 ONLY)			C3316	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
					C3317	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
R394	1-216-043-91	RES-CHIP 560	5%	1/10W	C3319	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
R395	1-216-043-91	(KV-32FS12/32FS16 ONLY) RES-CHIP 560	5%	1/10W						
いつづい	1-210-043-91	(KV-32FS12/32FS16 ONLY)		1/ 1000	C3320	1-164-005-11	CERAMIC CHIP	0.47µF		25V
R396	1-247-807-31	CARBON 100	5%	1/4W	C3321	1-163-009-11	CERAMIC CHIP	0.001µF	10%	50V
	001 01	(KV-32FS12/32FS16 ONLY)	0,0	.,	C3323	1-104-664-11	ELECT CLUB	47μF	20%	16V
R398	1-216-091-00	1	5%	1/10W	C3324	1-163-031-11	CERAMIC CHIP	0.01µF		50V
		(KV-27FV16/29FV16/29FV16	CONLY)		C3325 C3326	1-163-031-11 1-104-664-11	CERAMIC CHIP ELECT	0.01μF 47μF	20%	50V 16V
			•	ı	03320	1-10 4- 00 4- 11	LLLUI	÷ιμΓ	4 U /0	101



The components identified by shading and mark \triangle are critical for safety. Replace only with part number specified.

Note:

REF.NO.	PART NO.	DESCRIPTION	R	EMARK		REF.NO.	PART NO.	DESCRIPTION	ſ	REMARK	
C3327	1-104-664-11	ELECT	47µF	20%	16V		TRANSISTOR	2			
C3328	1-104-664-11	ELECT	47μF	20%	16V		INAMOIOTOI	<u>7</u>			
C3330	1-126-964-11	ELECT	47μι 10μF	20%	50V	Q3300	8-729-422-27	TRANSISTOR 2SD6	01A-QRS-T	(
C3331	1-120-904-11	CERAMIC CHIP	0.001µF	10%	50V 50V	Q3301	8-729-422-27	TRANSISTOR 2SD6	01A-QRS-TX	(
				10%		Q3302	8-729-422-27	TRANSISTOR 2SD6	01A-QRS-T	(
C3332	1-164-346-11	CERAMIC CHIP	1µF		16V	Q3304	8-729-216-22	TRANSISTOR 2SB7	09A-QRS-T	(
00000		050 4440 0140			10) (Q3305	8-729-216-22				
C3333	1-164-346-11	CERAMIC CHIP	1µF		16V						
C3334	1-164-005-11	CERAMIC CHIP	0.47µF		25V	Q3306	8-729-216-22	TRANSISTOR 2SB7	09A-ORS-T	<	
C3335	1-164-182-11	CERAMIC CHIP	0.0033µF	10%	50V	Q3308	8-729-216-22				
C3336	1-163-031-11	CERAMIC CHIP	0.01µF		50V	Q3309	8-729-422-27	TRANSISTOR 2SD6			
C3339	1-163-005-11	CERAMIC CHIP	470PF	10%	50V	Q3311	8-729-111-55	TRANSISTOR 2SD1		`	
						Q3311	8-729-216-22	TRANSISTOR 2SB7		(
C3340	1-126-967-11	ELECT	47µF	20%	50V	Q0012	0-123-210-22	TRANSISTOR 25D1	UJA-QINO-II	`	
C3341	1-164-222-11	CERAMIC CHIP	0.22µF		25V	00040	0 700 400 07	TDANICICTOD 2000	04 A ODC T	,	
C3342	1-163-037-11	CERAMIC CHIP	0.022µF	10%	50V	Q3313	8-729-422-27	TRANSISTOR 2SD6			
C3343	1-126-967-11	ELECT	47µF	20%	50V	Q3314	8-729-422-27	TRANSISTOR 2SD6			
C3344	1-164-222-11	CERAMIC CHIP	0.22µF		25V	Q3315	8-729-216-22				
			- 1			Q3316	8-729-216-22				
C3345	1-164-346-11	CERAMIC CHIP	1μF		16V	Q3317	8-729-422-27	TRANSISTOR 2SD6	01A-QRS-T	(
C3346	1-164-346-11	CERAMIC CHIP	-μ- 1μF		16V						
C3347	1-164-346-11	CERAMIC CHIP	ιμι 1μF		16V	Q3318	8-729-422-27	TRANSISTOR 2SD6			
C3349	1-164-005-11	CERAMIC CHIP	0.47μF		25V	Q3319	8-729-422-27	TRANSISTOR 2SD6			
			•	E0/		Q3320	8-729-422-27	TRANSISTOR 2SD6	01A-QRS-TX	(
C3350	1-163-233-11	CERAMIC CHIP	18PF	5%	50V	Q3321	8-729-216-22	TRANSISTOR 2SB7	09A-QRS-T	(
00054	4 400 440 00	CEDAMIC CUID	CODE	F 0/	F0\/	Q3323	8-729-422-27	TRANSISTOR 2SD6	01A-QRS-T	(
C3351	1-163-113-00	CERAMIC CHIP	68PF	5%	50V						
C3352	1-164-222-11	CERAMIC CHIP	0.22µF	/	25V						
C3353	1-126-967-11	ELECT	47μF	20%	50V		DECICEOD				
C3354	1-163-037-11		0.022µF	10%	50V		RESISTOR				
C3355	1-164-346-11	CERAMIC CHIP	1μF		16V	R3300	1-216-041-00	RES-CHIP	470	5%	1/10W
C3356	1-164-346-11	CERAMIC CHIP	1μF		16V	R3303	1-216-073-00	RES-CHIP	10K	5%	1/10W
C3357	1-164-346-11	CERAMIC CHIP	1μF		16V	R3304	1-216-133-00	RES-CHIP	3.3M	5%	1/10W
						R3305	1-216-037-00	RES-CHIP	330	5%	1/10W
						R3308	1-216-085-00	RES-CHIP	33K	5%	1/10W
	CONNECTOR					13300	1-210-005-00	KES-CHIF	JJN	3/0	1/1044
	CONNECTOR					Dagoo	4 040 005 04	DEC CUID	400	F 0/	4/40\4/
CN3300	1-573-301-21	CONNECTOR, BOAF	RD TO BOAR	D 20P		R3309	1-216-025-91	RES-CHIP	100	5%	1/10W
						R3310	1-216-025-91	RES-CHIP	100	5%	1/10W
						R3311	1-216-037-00	RES-CHIP	330	5%	1/10W
	DIODE					R3312	1-216-043-91	RES-CHIP	560	5%	1/10W
	DIODL					R3313	1-216-035-00	RES-CHIP	270	5%	1/10W
D3301	8-719-073-01	DIODE MA111-TX									
D3304	8-719-422-12	DIODE UDZ-TE-17-3	3.9B			R3316	1-216-295-91	SHORT			
						R3317	1-216-295-91	SHORT			
						R3318	1-216-061-00	RES-CHIP	3.3K	5%	1/10W
	<u>IC</u>					R3319	1-216-295-91	SHORT			
	<u>IC</u>					R3320	1-216-073-00	RES-CHIP	10K	5%	1/10W
IC3300	8-759-353-00	IC NJM2534M(TE2)									
IC3301	8-759-660-74	IC M65664FP-DS60	S			R3321	1-216-049-91	RES-CHIP	1K	5%	1/10W
IC3302	8-759-458-18	IC TDA8501T				R3322	1-216-091-00	RES-CHIP	56K	5%	1/10W
100002	0 700 100 10	10 15/100011				R3323	1-216-049-91	RES-CHIP	1K	5%	1/10W
						R3324	1-216-033-00	RES-CHIP	220	5%	1/10W
	2211					R3325	1-216-057-00	RES-CHIP	2.2K	5%	1/10W
	COIL					110020	1 210 001 00	TALO OT III	£.£!\	0/0	1/1044
L3300	1-414-267-11	INDUCTOR	10µH			R3328	1-216-295-91	SHORT			
L3301	1-410-682-31	INDUCTOR	470μH			R3329	1-216-033-00	RES-CHIP	220	5%	1/10W
L3302	1-414-267-11	INDUCTOR									
			10µH 10∪H			R3333	1-216-049-91	RES-CHIP	1K	5% 5%	1/10W
L3303	1-414-267-11	INDUCTOR	10µH			R3334	1-216-049-91	RES-CHIP	1K	5%	1/10W
L3304	1-414-267-11	INDUCTOR	10µH			R3335	1-216-049-91	RES-CHIP	1K	5%	1/10W
						I					

Note:

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REF.NO.	PART NO.	DESCRIPTION	R	EMARK		REF.NO.	PART NO.	DESCRIPTION	RI	EMARK	
		SHORT				D2200		RES-CHIP	000	5%	4/40\\
R3336	1-216-295-91					R3398	1-216-047-91		820		1/10W
R3338	1-216-295-91	SHORT				R3399	1-216-045-00	RES-CHIP	680	5%	1/10W
R3340	1-216-295-91	SHORT				R3400	1-216-089-91	RES-CHIP	47K	5%	1/10W
R3341	1-216-057-00	RES-CHIP	2.2K	5%	1/10W	R3401	1-216-089-91	RES-CHIP	47K	5%	1/10W
R3342	1-216-295-91	SHORT				R3402	1-216-081-00	RES-CHIP	22K	5%	1/10W
R3343	1-216-065-91	RES-CHIP	4.7K	5%	1/10W	R3403	1-216-089-91	RES-CHIP	47K	5%	1/10W
R3344	1-216-073-00	RES-CHIP	10K	5%	1/10W	R3404	1-216-081-00	RES-CHIP	22K	5%	1/10W
R3345	1-216-073-00	RES-CHIP	10K	5%	1/10W	R3405	1-216-089-91	RES-CHIP	47K	5%	1/10W
R3346	1-216-045-00	RES-CHIP	680	5%	1/10W						
R3347	1-216-049-91	RES-CHIP	1K	5%	1/10W						
1100-11	1 210 040 01	NEO OF III	IIV	0/0	1/1044		CRYSTAL				
R3349	1-215-857-11	METAL OXIDE	10	5%	1W		CITTOTAL				
R3350	1-216-049-91	RES-CHIP	1K	5%	1/10W	X3300	1-567-505-11	OSCILLATOR, CRYS	STAL		
R3351	1-216-041-00	RES-CHIP	470	5%	1/10W	X3301	1-781-377-11	VIBRATOR, CRYSTA	AL		
R3355	1-216-049-91	RES-CHIP	1K	5%	1/10W			- ,			
R3356	1-216-113-00	RES-CHIP	470K	5%	1/10W						
R3357	1-216-041-00	RES-CHIP	470	5%	1/10W		$\Delta \models =$				
R3358	1-216-689-11	RES-CHIP	39K	5%	1/10W	V /	N				
R3359	1-216-113-00	RES-CHIP	470K	5%	1/10W						
	1-216-051-00										
R3360		RES-CHIP	1.2K	5%	1/10W	*	A-1342-550-A	VA (VAR) MOUNTED	DC ROADD		
R3361	1-216-045-00	RES-CHIP	680	5%	1/10W		A-1342-330-A	(KV-27FV16/29FV16/29		')	
R3365	1-216-073-00	RES-CHIP	10K	5%	1/10W	ŧ	A-1342-549-A	VA (VAR) MOUNTED		1	
								(KV-32FS12/32FS16 O			
R3366	1-216-049-91	RES-CHIP	1K	5%	1/10W			(11.1 02.1 01.2 10.1 01.0 0			
R3367	1-216-073-00	RES-CHIP	10K	5%	1/10W		4 000 054 44	00DEW (M0V40) D	01477		
R3368	1-216-049-91	RES-CHIP	1K	5%	1/10W		4-382-854-11	SCREW (M3X10), P,	, 500 (+)		
R3369	1-216-049-91	RES-CHIP	1K	5%	1/10W						
D0070	4 040 040 04	DEC CUID	41/	m/	4/40\4/		CADACITOD				
R3370	1-216-049-91	RES-CHIP	1K	5%	1/10W		CAPACITOR				
R3371	1-216-049-91	RES-CHIP	1K	5%	1/10W	C805	1-129-763-00	FILM	0.033µF	5%	200V
R3372	1-216-049-91	RES-CHIP	1K	5%	1/10W	C005	1-129-703-00		•		200 V
R3373	1-216-049-91	RES-CHIP	1K	5%	1/10W	2225		(KV-27FV16/29FV16		,	000)/
R3374	1-216-025-91	RES-CHIP	100	5%	1/10W	C805	1-136-601-11	FILM	0.01UF	5%	630V
						0044	4 400 705 00	(KV-32FS12/32FS16		F 0/	2001/
R3375	1-216-025-91	RES-CHIP	100	5%	1/10W	C811	1-129-765-00	FILM	0.047µF	5%	200V
R3376	1-216-025-91	RES-CHIP	100	5%	1/10W			(KV-27FV16/29FV16		,	
R3377	1-216-041-00	RES-CHIP	470	5%	1/10W	C811	1-129-768-51	FILM	0.082µF	5%	200V
R3378	1-216-049-91	RES-CHIP	1K	5%	1/10W			(KV-32FS12/32FS16	ONLY)		
R3379	1-216-049-91	RES-CHIP	1K	5%	1/10W	C901	1-107-667-11	ELECT	2.2µF	20%	160V
N3319	1-210-043-31	NES-CHIP	IIX	3/0	1/1000						
R3380	1-216-043-91	RES-CHIP	560	5%	1/10W	C902	1-130-491-00	MYLAR	0.047µF	5%	50V
R3381	1-216-041-00	RES-CHIP	470	5%	1/10W	C903	1-126-925-11	ELECT	470µF	20%	10V
						C904	1-130-471-00	MYLAR	0.001µF	5%	50V
R3382	1-216-043-91	RES-CHIP	560	5%	1/10W	C905	1-106-383-00	MYLAR	0.047µF	10%	200V
R3383	1-216-041-00	RES-CHIP	470	5%	1/10W	C906	1-130-471-00	MYLAR	0.001µF	5%	50V
R3384	1-216-045-00	RES-CHIP	680	5%	1/10W	0000	1 100 11 1 00	WI D W	0.001μ1	070	001
R3385	1-216-043-91	RES-CHIP	560	5%	1/10W	C907	1-107-638-11	ELECT	33µF	20%	160V
R3386	1-216-043-91	RES-CHIP	470		1/10W	C908	1-126-925-11	ELECT	470µF	20%	10V
				5%		C909	1-161-830-00	CERAMIC	0.0047µF		500V
R3387	1-216-049-91	RES-CHIP	1K	5%	1/10W	C910	1-104-999-11	MYLAR	0.1μF	10%	200V
R3388	1-216-049-91	RES-CHIP	1K	5%	1/10W						10V
R3392	1-208-834-11	METAL CHIP	150K	0.50%	1/10W	C911	1-104-665-11	ELECT	100µF	20%	101
Dagge	1 010 005 01	CLIODT				C912	1-126-941-11	ELECT	470µF	20%	25V
R3393	1-216-295-91	SHORT	001/	mo *		C913	1-102-074-00	CERAMIC	0.001µF	10%	50V
R3395	1-216-689-11	RES-CHIP	39K	5%	1/10W	C914	1-130-491-00	MYLAR	0.047μF	5%	50V
R3396	1-216-081-00	RES-CHIP	22K	5%	1/10W	O01 1	1 100-431-00	WIT LA MIX	υ.υ τ ι μι	J /0	00 V
R3397	1-216-025-91	RES-CHIP	100	5%	1/10W						
					ı						



Noto:

The components identified by shading and mark \triangle are critical for safety. Replace only with part number specified.

Note:

REF.NO.	PART NO.	DESCRIPTION		REMARK	(REF.NO.	PART NO.	DESCRIPTION		REMARK	
	CONNECTOR					R915	1-249-417-11	CARBON	1K	5%	1/4W
	CONNECTOR							-			
CN901 *	1-564-508-11	PLUG, CONNECTO	R 5P			R916	1-249-417-11	CARBON	1K	5%	1/4W
CN902 *		CONNECTOR, BOA		RD 8P		R917	1-249-417-11	CARBON	1K	5%	1/4W
CN904 *		PLUG, CONNECTO				R918	1-247-807-31		100	5%	1/4W
0.100		. 200, 0020.0				R919	1-247-807-31	CARBON	100	5%	1/4W
						D000	4 0 40 440 44	OADDON	000	F 0/	4/4/4/
	DIODE					R920	1-249-416-11	CARBON	820	5%	1/4W
	DIODL					R921	1-249-429-11	CARBON	10K	5%	1/4W
D804	8-719-302-43	DIODE RGP10GPK0	G23			R922	1-249-397-11		22	5%	1/4W
D805	8-719-991-33	DIODE 1SS133T-77	,			R923	1-249-401-11	CARBON	47	5%	1/4W
D806	8-719-991-33	DIODE 1SS133T-77	•								
D807	8-719-210-21	DIODE ERA82-004	ГР5								
D901	8-719-110-88	DIODE MTZJ-T-77-3	19								
D902	8-719-110-88	DIODE MTZJ-T-77-3	19								
D903	8-719-991-33	DIODE 1SS133T-77	•								
							ACCESSORI	ES AND PACKAG	<u>SING</u>		
	COIL					*	4 0 44 0 50 04	DAG PROTECTION			
						*	4-041-259-01	BAG, PROTECTION (KV-32FS12/32FS			
L801	1-406-989-21 1-459-111-00	INDUCTOR	10mH 10mH			*	4-041-255-01	BAG, PROTECTION	,		
L802 L901	1-459-111-00		18µH					(KV-27FV16/29FV	16/29FV16C	ONLY)	
L301	1-412-320-11	INDUCTOR	ιομιι			*	4-073-714-01	CARTON, INDIVID	UAL		
								(KV-32FS12/32FS	,		
	TRANSISTOR)				*	4-075-524-01	CARTON, INDIVID			
	INANSISTON	1						(KV-29FV16/29FV			
Q807	8-729-931-45	TRANSISTOR IRF6	14			*	4-075-517-01	CARTON, INDIVID			
Q808	8-729-140-97	TRANSISTOR 2SB7	'34-T-34					(KV-27FV16 ONLY)		
Q901	8-729-017-06	TRANSISTOR 2SC4	1793								
Q902	8-729-017-05	TRANSISTOR 2SA1	837			*	4-075-515-01	CUSHION ASSY, U	JPPER		
Q903	8-729-423-33	TRANSISTOR 2SC3	311A-QRS	ГА				(KV-27FV16/29FV		ONLY)	
						*	4-075-516-01	CUSHION ASSY, L			
Q904	8-729-423-33	TRANSISTOR 2SC3	311A-QRS	ГΑ				(KV-27FV16/29FV	16/29FV16C	ONLY)	
Q905	8-729-119-76	TRANSISTOR 2SA1	309A-QRS	ГΑ		*	4-073-715-01	CUSHION ASSY, U	JPPER		
Q906		TRANSISTOR 2SC3						(KV-32FS12/32FS	16 ONLY)		
						*	4-073-716-01	CUSHION ASSY, L	.OWER		
								(KV-32FS12/32FS	16 ONLY)		
	RESISTOR						4-075-499-41	MANUAL, INSTRU	CTION		
	KESISTOR							(KV-29FV16/29FV	16C ONLY)		
R818	1-216-025-91	RES-CHIP	100	5%	1/10W		4-075-499-21	MANUAL, INSTRU	CTION		
R826	1-249-421-11	CARBON	2.2K	5%	1/4W			(KV-27FV16/32FS		ONLY)	
R876	1-216-049-91	RES-CHIP	1K	5%	1/10W					•	
R901	1-249-401-11	CARBON	47	5%	1/4W						
R902	1-249-386-11	CARBON	2.7	5%	1/4W			REMOTE COMMAN	NDER		
								ILLINOTE COMMA	IDLIX		
R903	1-249-414-11	CARBON	560	5%	1/4W						
R904	1-249-432-11	CARBON	18K	5%	1/4W	1-	418-496-11	REMOTE COMMAI		,	
R905	1-249-417-11	CARBON	1K	5%	1/4W			(KV-27FV16/29FV	16/29FV16C	ONLY)	
R906	1-249-432-11		18K	5%	1/4W	1-	418-387-11	REMOTE COMMA	NDER (RM-)	Y168)	
R907	1-249-386-11	CARBON	2.7	5%	1/4W			(KV-32FS12 ONLY)		
		-				1-	418-384-11	REMOTE COMMA	,	Y169)	
R908	1-249-414-11	CARBON	560	5%	1/4W			(KV-32FS16 ONLY)		
R909	1-260-312-11	CARBON	47	5%	1/2W	4-	978-977-01	BATTERY COVER			
R910	1-216-476-11	METAL OXIDE	180	5%	3W			(FOR RM-Y168/RM	1-Y169/RM-	Y171)	
R911	1-249-403-11	CARBON	68	5%	1/4W						
R912	1-247-815-91		220	5%	1/4W						
R913	1-249-403-11		68	5%	1/4W						
R914	1-249-410-11		270	5%	1/4W						
	. = .0 110 11	- · · · - · · · ·		3/0	"…						

HISTORY INFORMATION FOR THE FOLLOWING MANUAL:

SERVICE MANUAL

BA-5 CHASSIS

MODEL NAME	REMOTE COMMANDER	<u>DESTINATION</u>	CHASSIS NO.
KV-27FV16	RM-Y171	US	SCC-S40K-A
KV-27FV16	RM-Y171	CND	SCC-S41J-A
KV-29FV16	RM-Y171	E	SCC-S38Q-A
KV-29FV16C	RM-Y171	E	SCC-S38R-A
KV-32FS12	RM-Y168	US	SCC-S40F-A
KV-32FS12	RM-Y168	CND	SCC-S41F-A
KV-32FS16	RM-Y169	US	SCC-S40G-A
KV-32FS16	RM-Y169	CND	SCC-S41G-A

ORIGINAL MANUAL ISSUE DATE: 5/2000

ALL REVISIONS AND UPDATES TO THE ORIGINAL MANUAL ARE APPENDED TO THE END OF THE PDF FILE.

REVISION DATE	REVISION TYPE	SUBJECT
5/2000	No revisions or updates	are applicable at this time.
6/2000	CORRECTION-1	New Block Diagram
10/2002	CORRECTION-2	New 2 Pin THP601



SERVICE MANUAL



<u>MODEL</u>	<u>COMMANDER</u>	<u>DEST</u>	CHASSIS NO.
KV-27FV16	RM-Y171	US	SCC-S40K-A
KV-27FV16	RM-Y171	CND	SCC-S41J-A
KV-29FV16	RM-Y171	E	SCC-S38Q-A
<i>KV-29FV16C</i>	RM-Y171	E	SCC-S38R-A
KV-32FS12	RM-Y168	US	SCC-S40F-A
KV-32FS12	RM-Y168	CND	SCC-S41F-A
KV-32FS16	RM-Y169	US	SCC-S40G-A
KV-32FS16	RM-Y169	CND	SCC-S41G-A

CORRECTION-1

Subject: New Block Diagrams

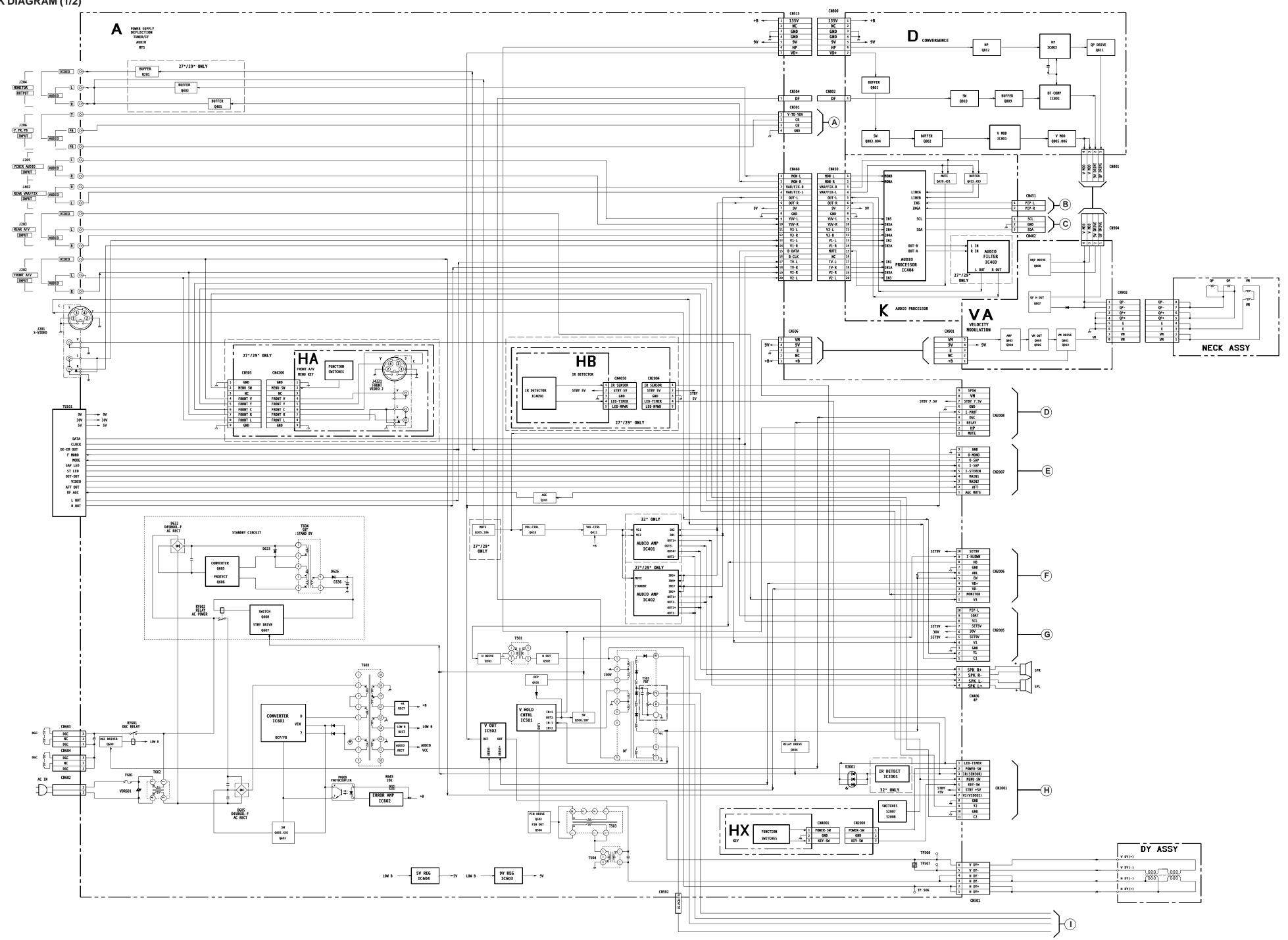
Correct the service manual as shown below. File this correction with the service manual.

Section 6: Block Diagrams (Page 31-34)
Size of Block Diagrams increased and replaced.

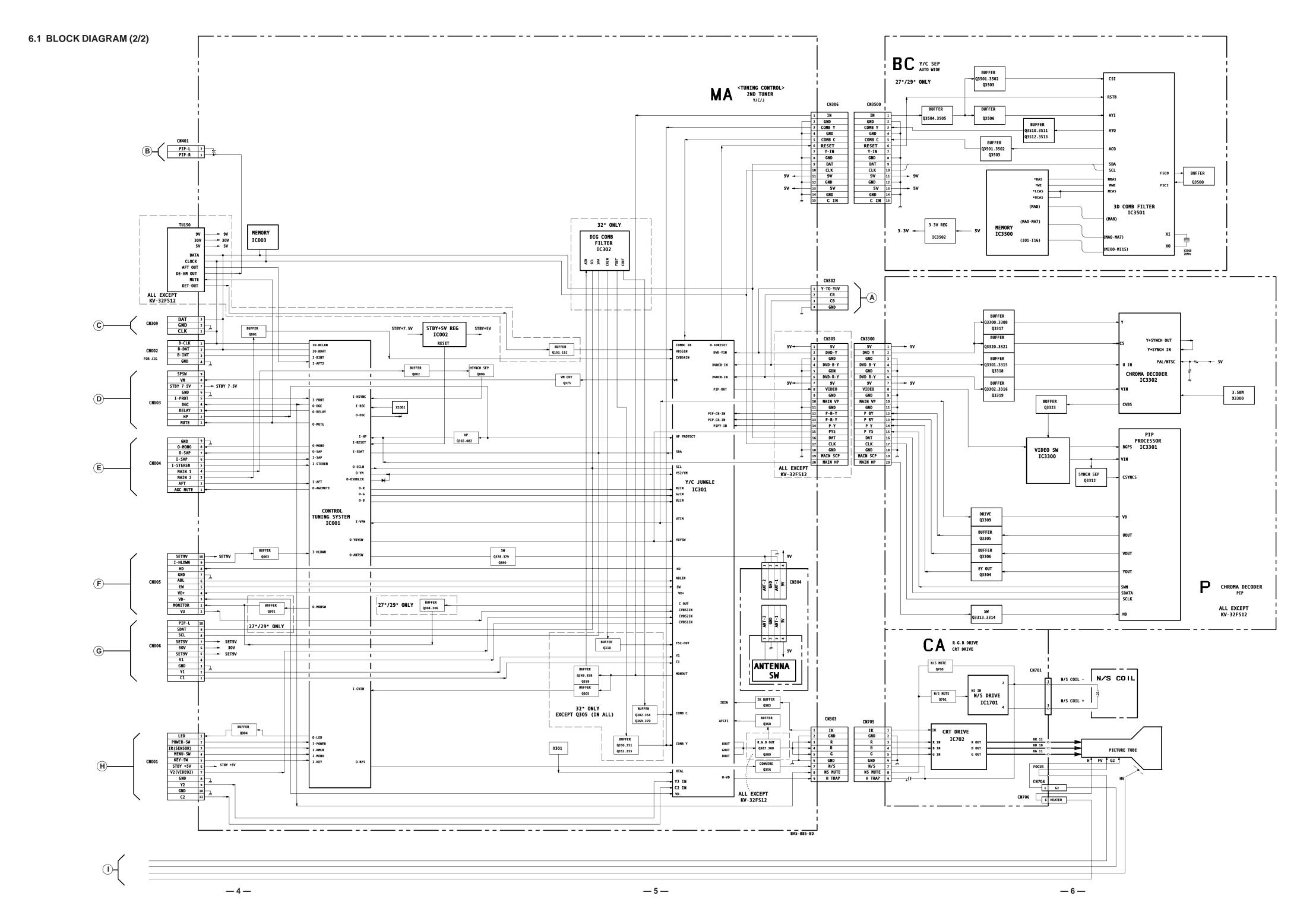


—3 —

6.1 BLOCK DIAGRAM (1/2)



-2-





SERVICE MANUAL

BA-5 chassis

MODEL NAME	REMOTE COMMANDER	<u>DESTINATION</u>	CHASSIS NO.
KV-27FV16	RM-Y171	US	SCC-S40K-A
KV-27FV16	RM-Y171	CND	SCC-S41J-A
KV-29FV16	RM-Y171	E	SCC-S38Q-A
KV-29FV16C	RM-Y171	E	SCC-S38R-A
KV-32FS12	RM-Y168	US	SCC-S40F-A
KV-32FS12	RM-Y168	CND	SCC-S41F-A
KV-32FS16	RM-Y169	US	SCC-S40G-A
KV-32FS16	RM-Y169	CND	SCC-S41G-A

CORRECTION - 2

SUBJECT: NEW 2 PIN THP601

Correct the service manual as shown. File this Correction with the service manual.

SECTION 6: DIAGRAMS

6-3. A Board Schematic Diagram (Page 39)

SECTION 8: ELECTRICAL PARTS LIST (Page 73)

TRINITRON® COLOR TELEVISION SONY®

: Corrected Item

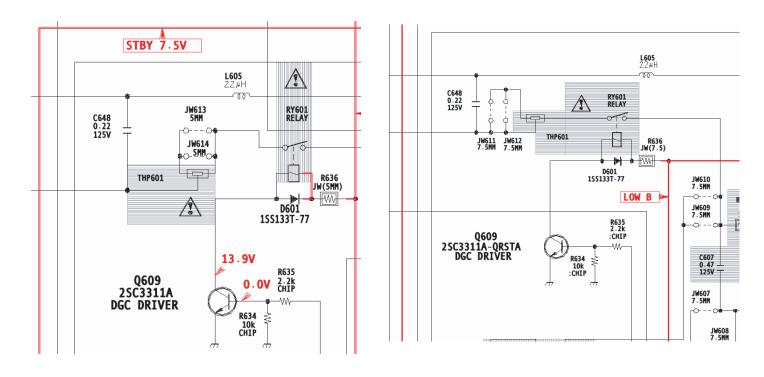
SECTION 6: DIAGRAMS

6-3.A Board Schematic Diagram (Page 39)

If a set requires a 3 pin (THP601) thermistor it may still be ordered using the existing part number. If a set requires a 2 pin (THP601) thermistor the new part number must be used.

For 3 Pin Configuration

For 2 Pin Configuration



SECTION 8: ELECTRICAL PARTS LIST (Page 73)

OLD				NEW			
REF. NO.	PART NO.	DESCRIPTION	REF. NO.	PART NO.	DESCRIPTION		
<u>↑</u> THP601	1-803-540-11	THERMISTOR		1-803-540-11 1-804-313-11	THERMISTOR (3 PIN) THERMISTOR (2 PIN)		

Sony Corporation Sony Technology Center Technical Services Services Promotion Dept.